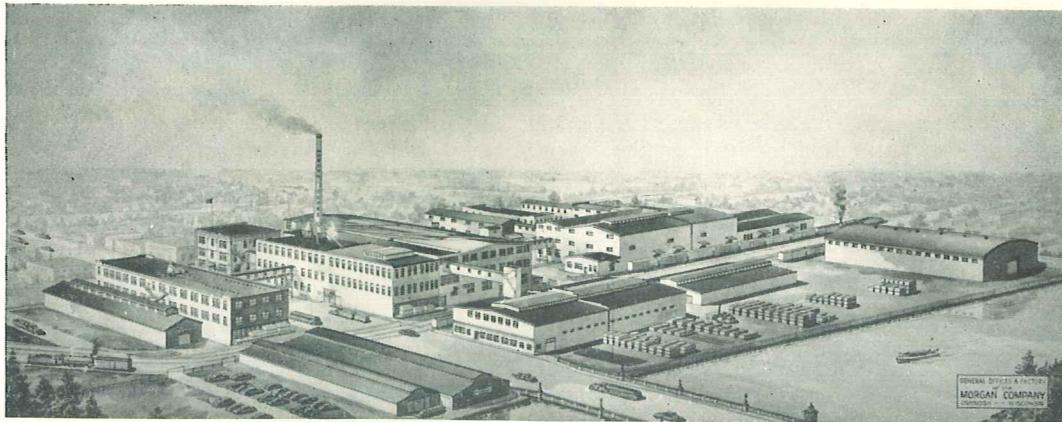


# Stairwork Manual and Catalog of MORGAN STAIR PARTS

**MORGAN**



GENERAL OFFICES AND FACTORY OF MORGAN COMPANY • OSHKOSH, WISCONSIN

The Stairway, M-760 shown on front cover is of Regency design and includes: M-720 Rail (2 $\frac{1}{4}$ " x 2 $\frac{3}{8}$ ")—M-764 Starting Newel—M-756 Landing Newel—M-726 Easement—M-742 Gooseneck 2 Riser—M-777 Balusters—M-784 Bracket.



M-859

## STAIRWAYS OF CHARM

### *Easy on the Eye . . . Easy to Ascend!*

The keystone of an interior in rare good taste is a stairway of staunch simplicity and graceful sweep. Such a lovely stairway is yours today! You can have *all* of the advantages of correct design, accessibility and durability in the stairway for your home by selecting Morgan pre-

cision made, stock stairwork — and the cost will be well within the bounds of your budget.

M-859 Stairway includes: M-769 Starting Newel—  
M-775 Landing Newel—M-731 Gooseneck 2 Riser—  
M-720 Rail (2 $\frac{1}{4}$ " x 2 $\frac{3}{8}$ ")—M-777 Balusters.

Three generations of leadership in Stairwork Designing and Manufacturing experience is the background of MORGAN Stairparts and is your guide to correct stair building.

Leading architects and stair builders for over 90 years have used Morgan Stairwork with complete satisfaction.

# STAIRWORK *of Precision Manufacture*

## ...SKILLED CRAFTSMEN PRODUCE MORGAN STAIRWORK

RIVALING the skillful designs and superb workmanship of outstanding 17th and 18th century American woodcarvers, Morgan Master Craftsmen, with great patience and trained hands create for today's homes gems of stairwork design.

Each Newel, Baluster and Easement in the Morgan line is precision made. Each is a perfect specimen of good designing and superb manufacture—the kind of dependable stairwork that makes beautiful, sturdy stairways. Because of the never varying excellent quality of Morgan Stairwork, the Morgan Company for three generations has been nationally recognized as one of the foremost stairwork manufacturers in the United States.

### A Complete Line—Easy to Fit

The Morgan line of Stairwork includes the necessary parts to build all standard types of Stair-

ways and comes to the stair builder in clean, air tight, trade-marked cartons of heavy board. Complete directions for fitting and the necessary fitting bolts are furnished with all Easements, making Stair building much easier and assuring the owner of a correctly fitted, sturdy Stairway.

All Morgan Stairwork is furnished in the best suited woods for the purpose, properly kiln dried and manufactured to satin-like smoothness. Stair Rail, Newels, and Balusters are Unselected Birch. Tread and Risers, Oak.



Precision workmanship is the dominant keynote in every department of the Morgan factory. Here is a Morgan craftsman reproducing an authentic Colonial newel post.



Like the Master Craftsmen of old, workmen in the Morgan factory are skilled artisans and spare no amount of careful hand work to produce a perfect product.

Morgan Stairwork is sold only through Retail Lumber and Millwork Dealers. Large, complete stocks are carried to facilitate prompt deliveries at all times.

### Architecturally Correct...

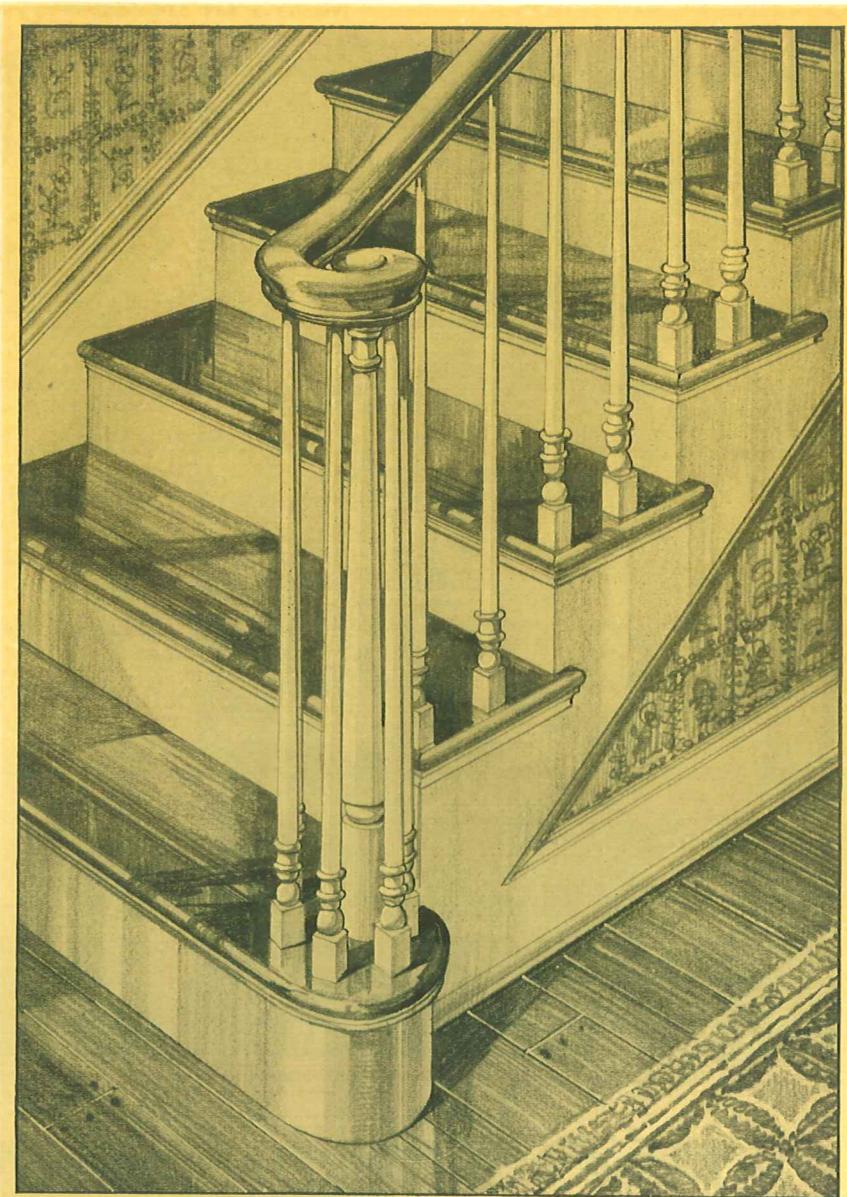
Morgan Stairwork is architecturally correct to the finest detail. All parts of the line are precision made to fit together perfectly producing Stairways of excellence.

*A*  
SERIES OF  
BEAUTIFUL  
STAIRWAYS  
... *Styled for*  
TODAY'S HOMES

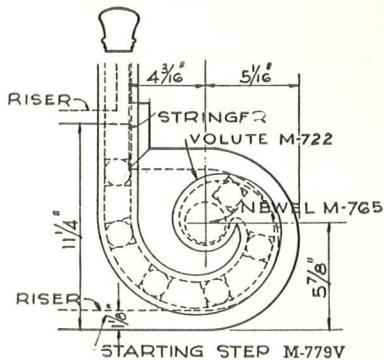
On this and the following pages are shown a few examples of the interesting varieties of stairways possible to produce with Morgan Stair Parts.

A stairway to be well designed must consist of graceful, well proportioned, perfectly matched parts made of smoothly finished enduring woods. Such a stairway reflects the good taste of its owner and is a source of lasting joy.

Around the stairway the whole scheme of interior finish and decoration is usually developed. A beautiful stairway encourages a beautiful interior. Understanding this, one can readily appreciate the importance of carefully considering every factor that enters into sound stair building, both from the standpoint of serviceability and lasting design.



M-856



**The CORNWALL HOUSE STAIRWAY—Connecticut**

An eighteenth century Stairway of rare charm. A graceful Colonial adaptation well suited to present-day homes of traditional architecture.

The suggested Starting Section shown above includes:

M-779V Starting Step—M-765 Starting Newel—M-722 Volute—M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-892 Balusters.

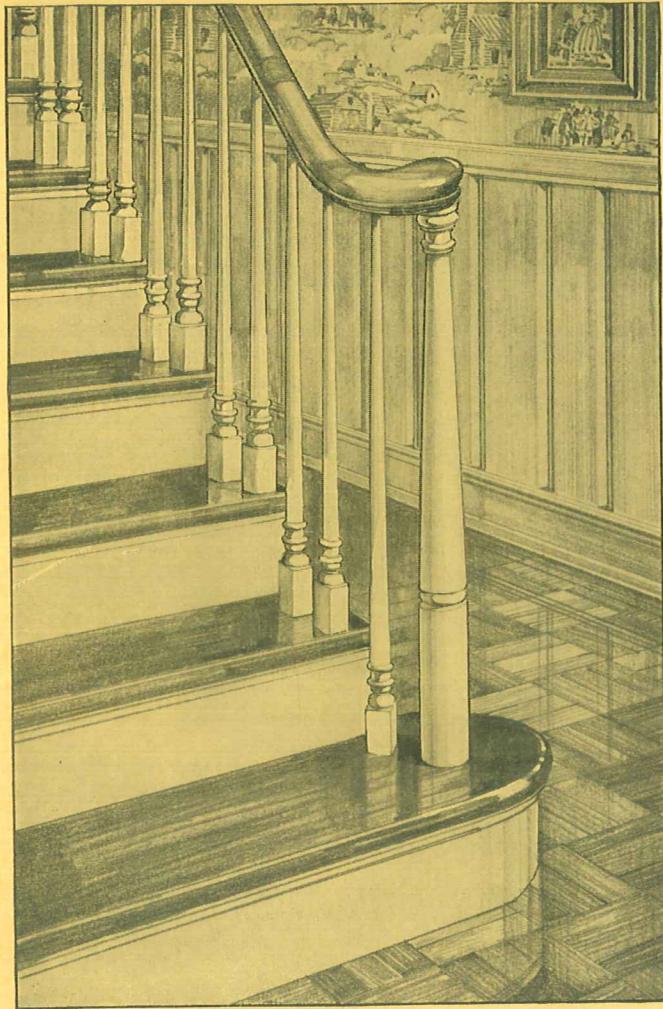
(ALTERNATE—M-780 Starting Step—M-765 Starting Newel—M-719 Volute)

Your stair builder will tell you exactly what Morgan stair parts are required to meet your particular stair building problem.

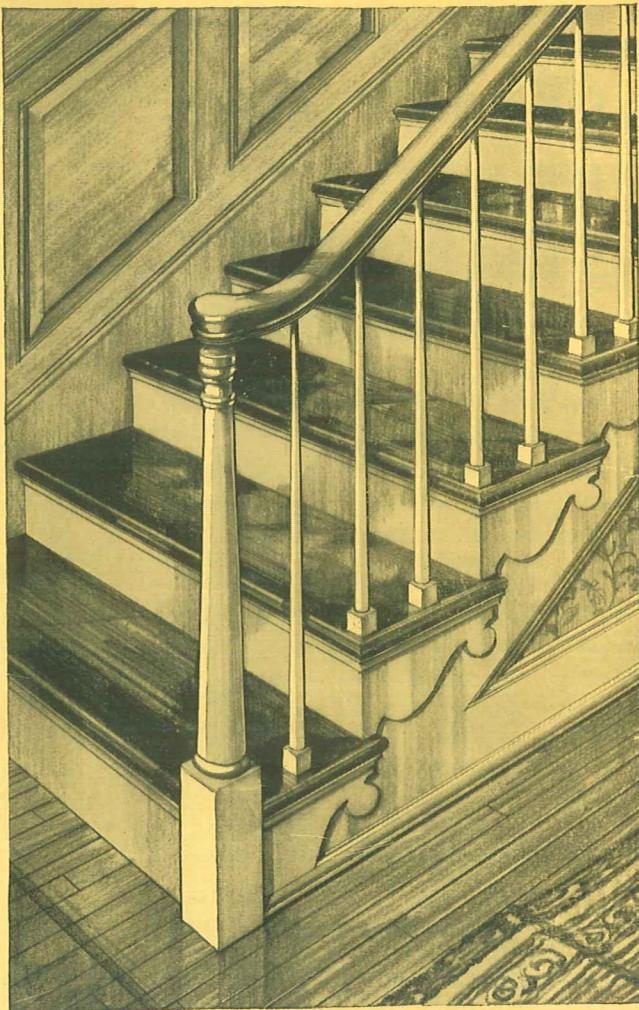
FOR COMPLETE MEASUREMENTS OF MORGAN STAIR PARTS SEE PAGES 14 AND 15

M O R G A N      *Authentic*      S T A I R W O R K

MORGAN STAIRWAYS



M-857



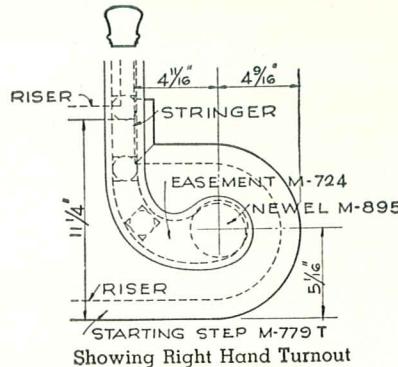
M-858

**The EASTERN POINT STAIRWAY**

You will never tire of the simple beauty of this lovely Morgan Colonial Stairway. It is very pleasing to look at from any angle.

The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-779T Starting Step—M-895 Starting Newel—M-724 Turnout Easement—M-892 Balusters



**The ANNAPOLIS STAIRWAY**

From the State Capitol Building at Annapolis, Maryland, comes the inspiration for this unusually fine adaptation.

The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-766A Starting Newel—M-725 Easement with Newel Cap—M-894 Balusters—M-882 Brackets.

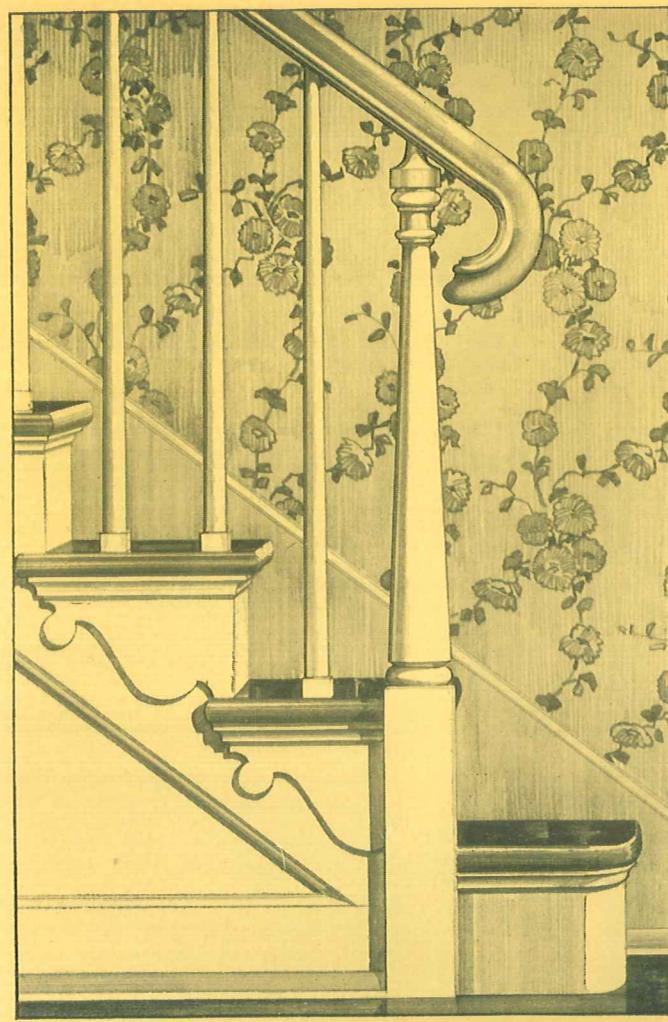
Your stair builder will tell you exactly what Morgan stair parts are required to meet your particular stair building problem.

All parts furnished in Unselected Birch except Treads and Risers

FOR COMPLETE MEASUREMENTS OF MORGAN STAIR PARTS SEE PAGES 14 AND 15

M O R G A N   *Authentic*   S T A I R W O R K

MORGAN STAIRWAYS



M-763

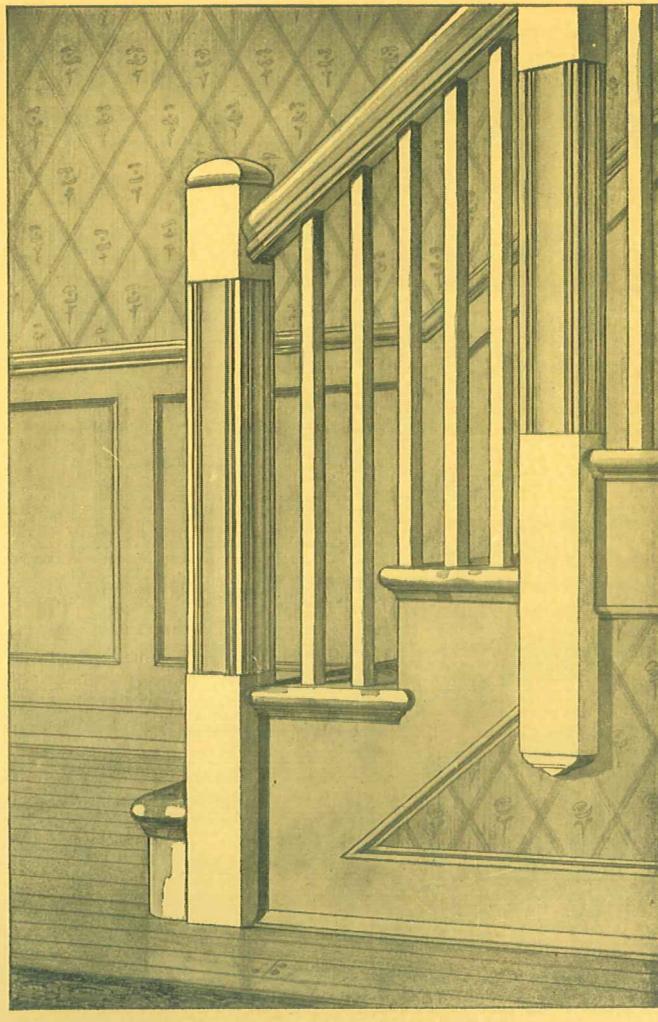
**The STANTON STAIRWAY**

A gracefully designed stairway that will add much to the beauty of any home.

The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ )—M-752 Starting Rail Drop—M-754 Starting Newel—M-894 Balusters—M-896 Starting Step—M-882 Brackets.

All parts furnished in Unselected Birch except Treads and Risers.



M-853A

**The STEIGEL STAIRWAY**

Some of the best of the old original Colonial Stairways were very plain—free from ornate detail and it is these plainer types that are most suited to present-day home building. An example of this simplicity of detail is shown above. This interesting design comes from an old Dutch Colonial house in Lancaster County, Pennsylvania.

The suggested Starting Section shown above includes:

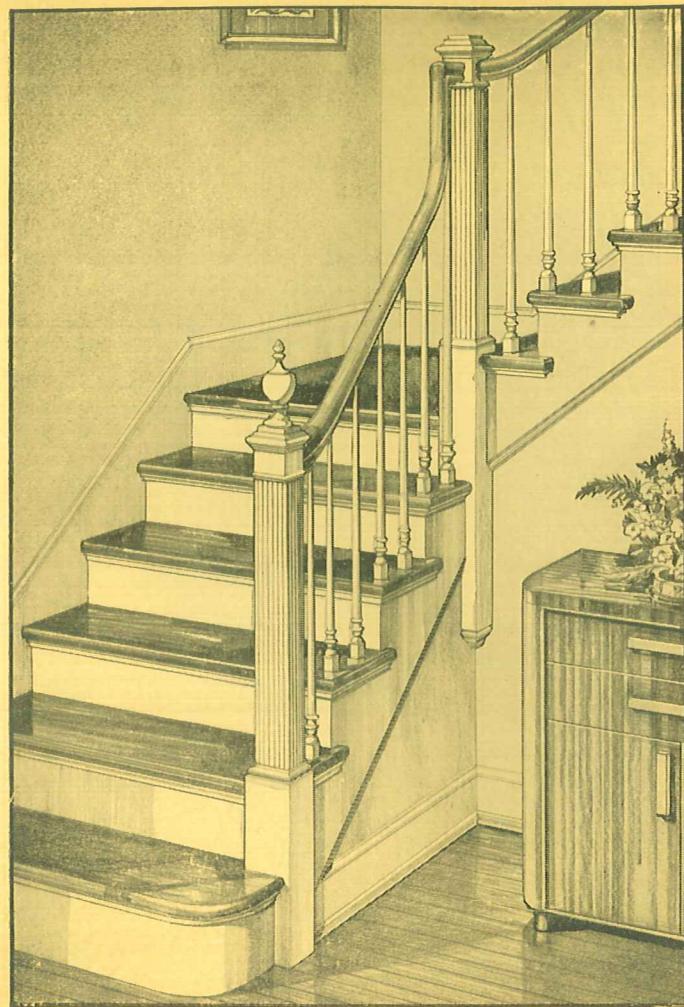
M-896 Starting Step—M-885 Starting Newel—M-890 Landing Newel—M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ )—M-893 Balusters.

Your stair builder will tell you exactly what Morgan stair parts are required to meet your particular stair building problem.

FOR COMPLETE MEASUREMENTS OF MORGAN STAIR PARTS SEE PAGES 14 AND 15

M O R G A N   *Authentic*   S T A I R W O R K

MORGAN STAIRWAYS



M-851

**The GUILFORD STAIRWAY**

A very beautiful Georgian Stairway reproduced from an original in an old eighteenth century home in Baltimore, Maryland. The reeded Starting Newel capped with an urn of graceful scale is truly a work of art.

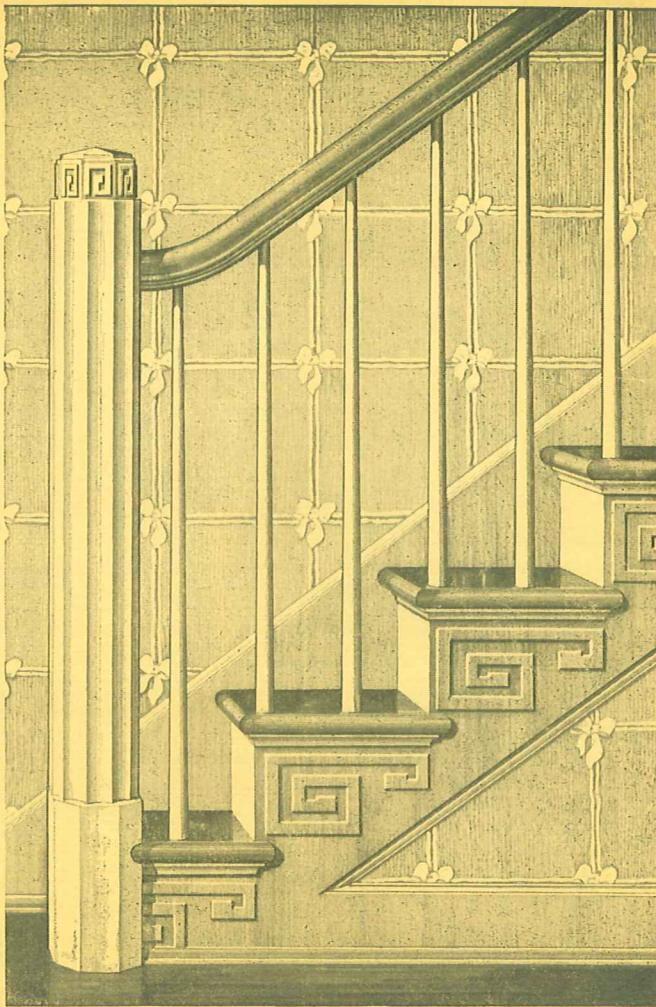
The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-726 Easement—M-731 Gooseneck 2 Riser—M-896 Starting Step—

M-884 Starting Newel—M-892 Balusters—M-891 Landing Newel.

All parts furnished in Unselected Birch except Treads and Risers.

Your stair builder will tell you exactly what Morgan stair parts are required to meet your particular stair building problem.



M-760

**The REGENCY STAIRWAY**

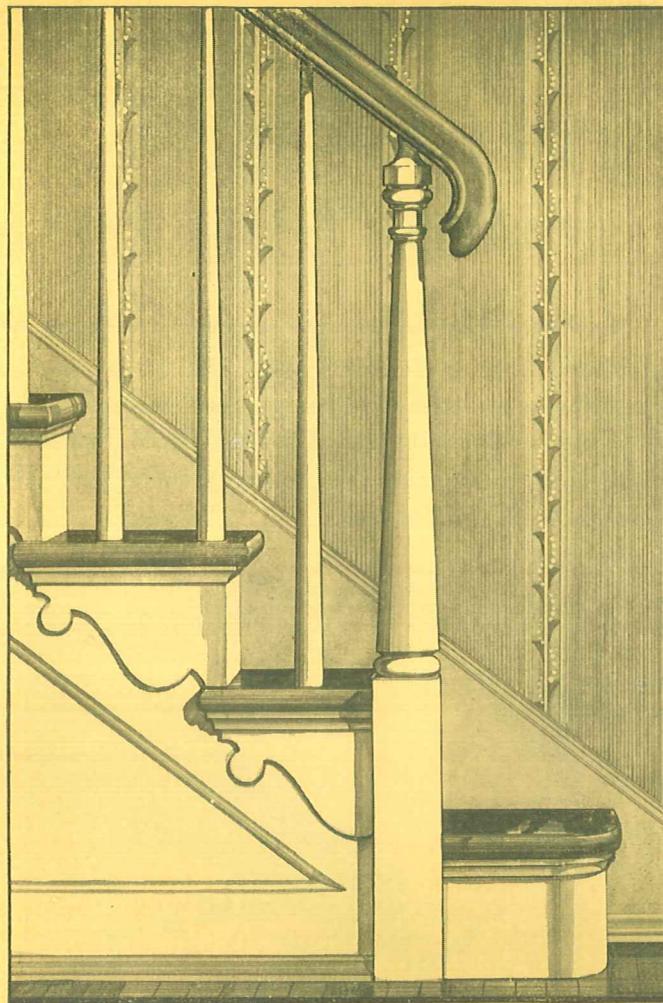
A distinctive design. Ideal for use in any modern interior as well as homes of period styling.

The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-764 Starting Newel—M-726 Easement—M-777 Balusters—M-784 Bracket.

M O R G A N *Authentic* S T A I R W O R K

MORGAN STAIRWAYS



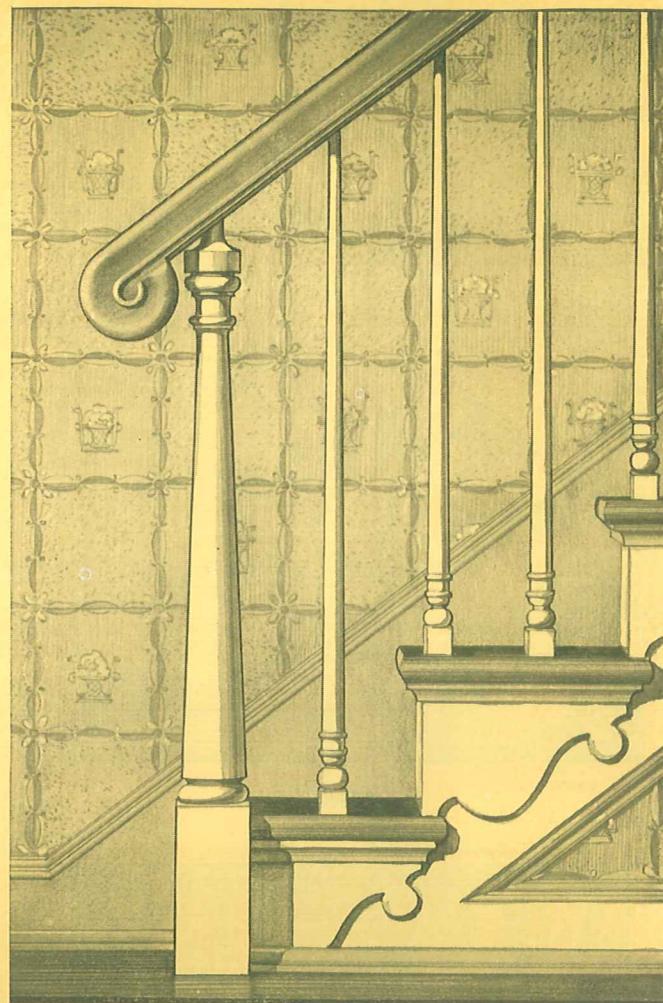
M-762

**The ANDOVER STAIRWAY**

A most attractive new stairway created by Morgan Designers. Adapted for use in modern as well as traditional homes.

The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ )—M-751 Starting Rail Drop—M-896 Starting Step—M-754 Starting Newel—M-777 Balusters—M-882 Brackets.



M-761

**The VICTORIA STAIRWAY**

For TO-DAY'S home! . . . Modern in design yet admirably suited for use in both traditional and modern homes.

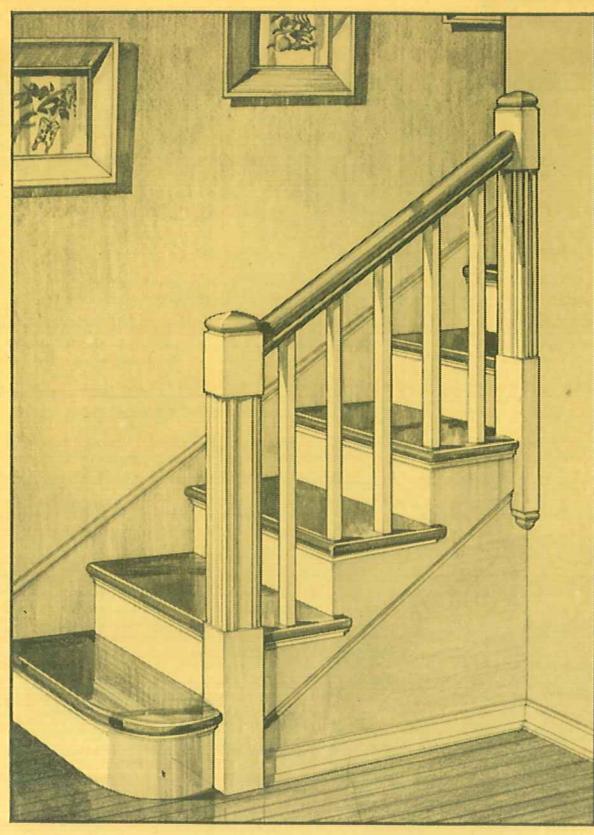
The suggested Starting Section shown above includes:

M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ )—M-750 Vertical Volute—M-753 Starting Newel—M-892 Balusters—M-882 Brackets.

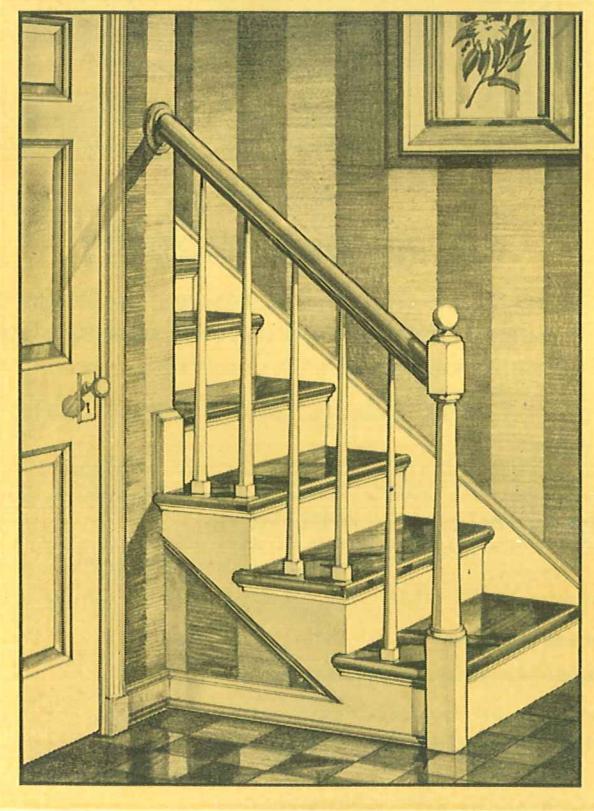
All parts furnished in Unselected Birch except Treads and Risers.

Your stair builder will tell you exactly what Morgan stair parts are required to meet your particular stair building problem.

FOR COMPLETE MEASUREMENTS OF MORGAN STAIR PARTS SEE PAGES 14 AND 15



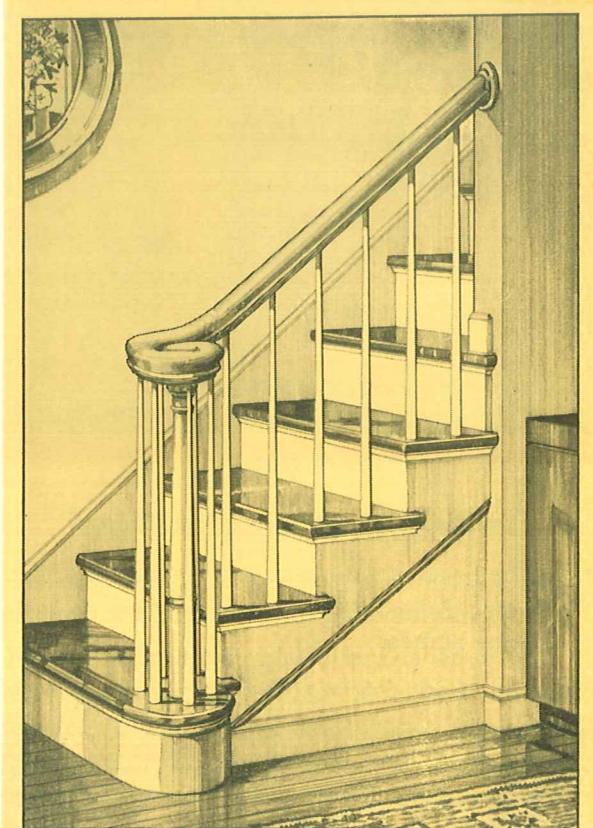
M-853A



M-859A

*The COMBINATION  
OPEN and CLOSED  
STAIRWAY.....  
STYLED by MORGAN*

Here are three excellent examples of combined closed and open stairways. The M-720 Rail in M-856A and M-859A Stairways dies in Rosette M-905A while in Stairway M-853A half Newel terminates the run. Note variations in Starting Steps, Starting Newels and Balusters.



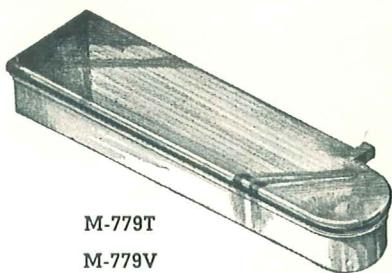
M-856A

M-853A Stairway includes: M-896 Starting Step—M-885 Starting Newel—M-890 Landing Newel—S4S  $1\frac{1}{8}$ " Balusters—M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")

M-856A Stairway includes: M-779V Starting Step—M-765 Starting Newel—M-722 Volute—M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-777 Balusters—M-905A Rosette.

M-859A Stairway includes: M-769 Starting Newel—M-894 Balusters—M-720 Rail ( $2\frac{1}{4}$ " x  $2\frac{3}{8}$ ")—M-905A Rosette.

# M O R G A N      *Authentic*      S T A I R W O R K



M-779T

M-779V

## COLONIAL STAIR PARTS

### BULL NOSE STARTING STEP

(Reversible, Left or Right)

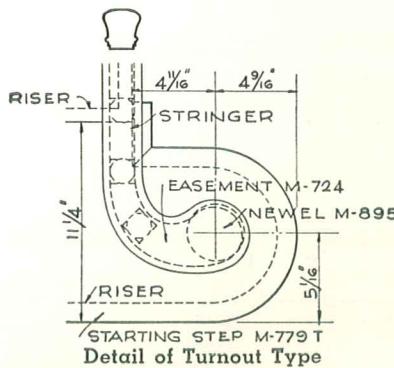
M-779T For Turnouts M-723 and M-724.

M-779V For Volutes M-721 and M-722.

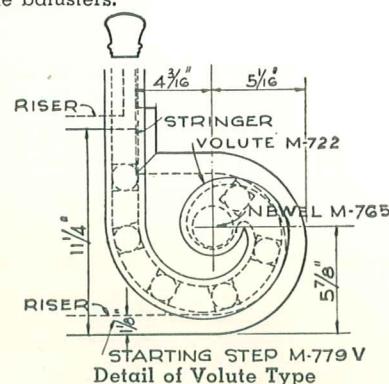
Includes: Tread  $1\frac{1}{8}$ " x  $11\frac{1}{4}$ ", Riser  $\frac{3}{4}$ " x 7" and Cove, K-D.  
For Stairs 3'-6" Wide

M-779T 4'-6" Long Overall  
M-779V 4'-6" Long Overall

Holes are bored in the Treads to correctly locate position of Newels and the Treads of M-779V show a pencil outline of the Volute which acts as a guide in properly placing the balusters.

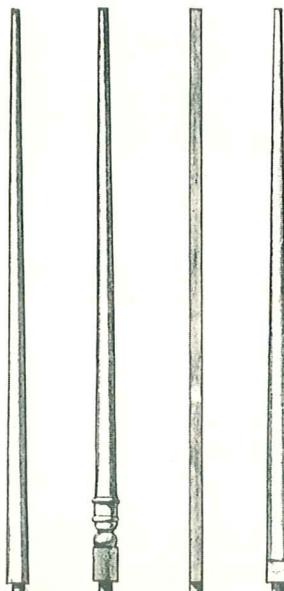


Detail of Turnout Type



Detail of Volute Type

### BALUSTERS



M-777

M-892

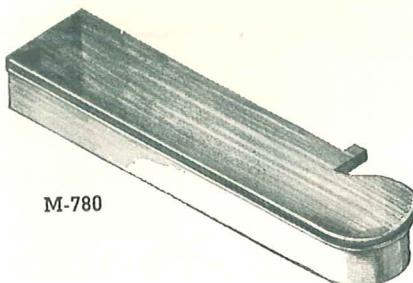
M-893

M-894

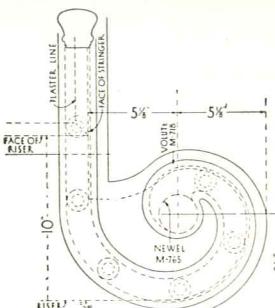
M-777— $1\frac{3}{8}$ " Diameter, Doweled  
M-892— $1\frac{3}{8}$ " x  $1\frac{3}{8}$ ", Dovetailed  
M-893— $\frac{3}{4}$ " x  $1\frac{1}{8}$ ", Dovetailed  
M-894— $1\frac{1}{4}$ " x  $1\frac{1}{4}$ ",  
Dovetailed

BIRCH. Unselected for Color.

Sizes: 30" 33" 36" 42"



FOR STAIRS 3'-6" WIDE  
M-780 4'-6" Long Overall

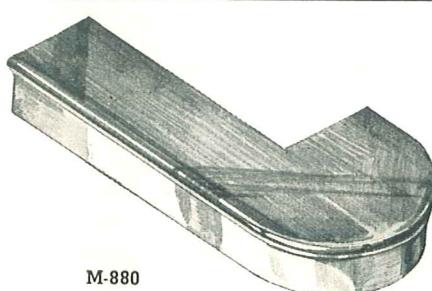


Detail of Volute Type

### EXTRA RAIL BOLTS



Size  $1\frac{5}{16}$ " x  $4\frac{1}{2}$ "

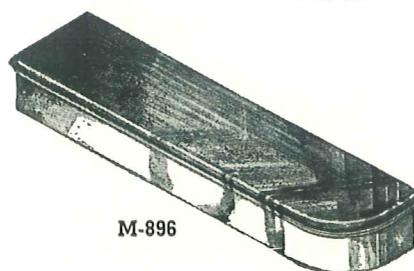


M-880 4'-6" Long Overall  
M-880 5'-0" Long Overall

### CIRCLE END STARTING STEP

(Reversible)

Includes, Tread  $1\frac{1}{8}$ " x  $11\frac{1}{2}$ ", Riser  $\frac{3}{4}$ " x 7" and  
Cove, K-D.



### CIRCLE CORNER STARTING STEP

(Reversible)

Includes, Tread  $1\frac{1}{8}$ " x  $11\frac{1}{2}$ ", Riser  $\frac{3}{4}$ " x 7" and  
Cove, K-D.

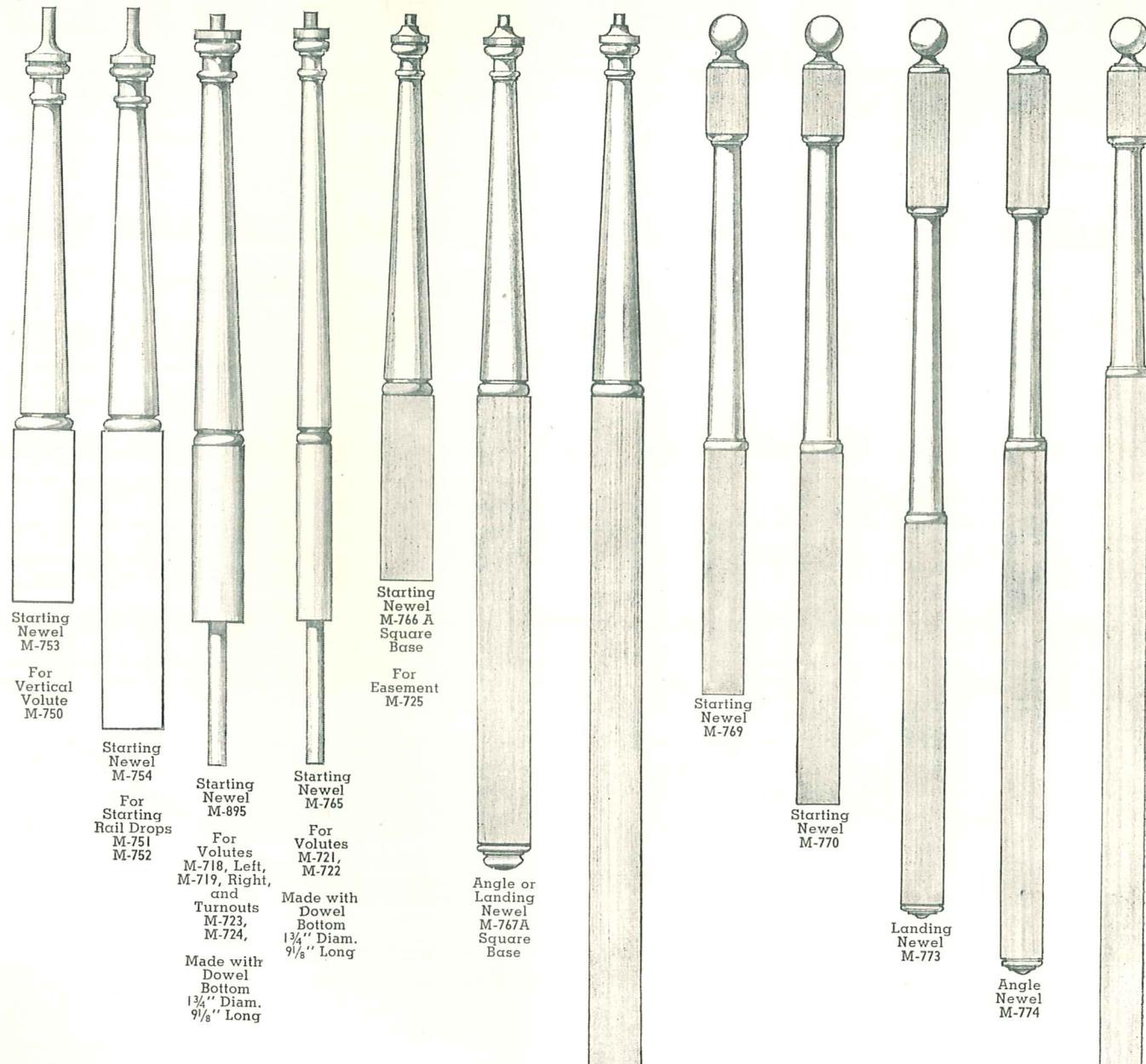
M-896 4'-0" Long Overall

All Morgan  
Stair Parts  
Are Packed  
in Strong  
Trademarked  
Cartons

**MORGAN**

M O R G A N   *Authentic*   S T A I R W O R K

NEWEL POSTS—For M-720 Rail  $2\frac{1}{4}'' \times 2\frac{3}{8}''$



See Page 15 for Complete Measurements

All Morgan Stair Parts Are Packed in Strong Trademarked Cartons

**MORGAN**

Angle Newel  
M-768A  
Square Base

Angle  
Newel  
M-775



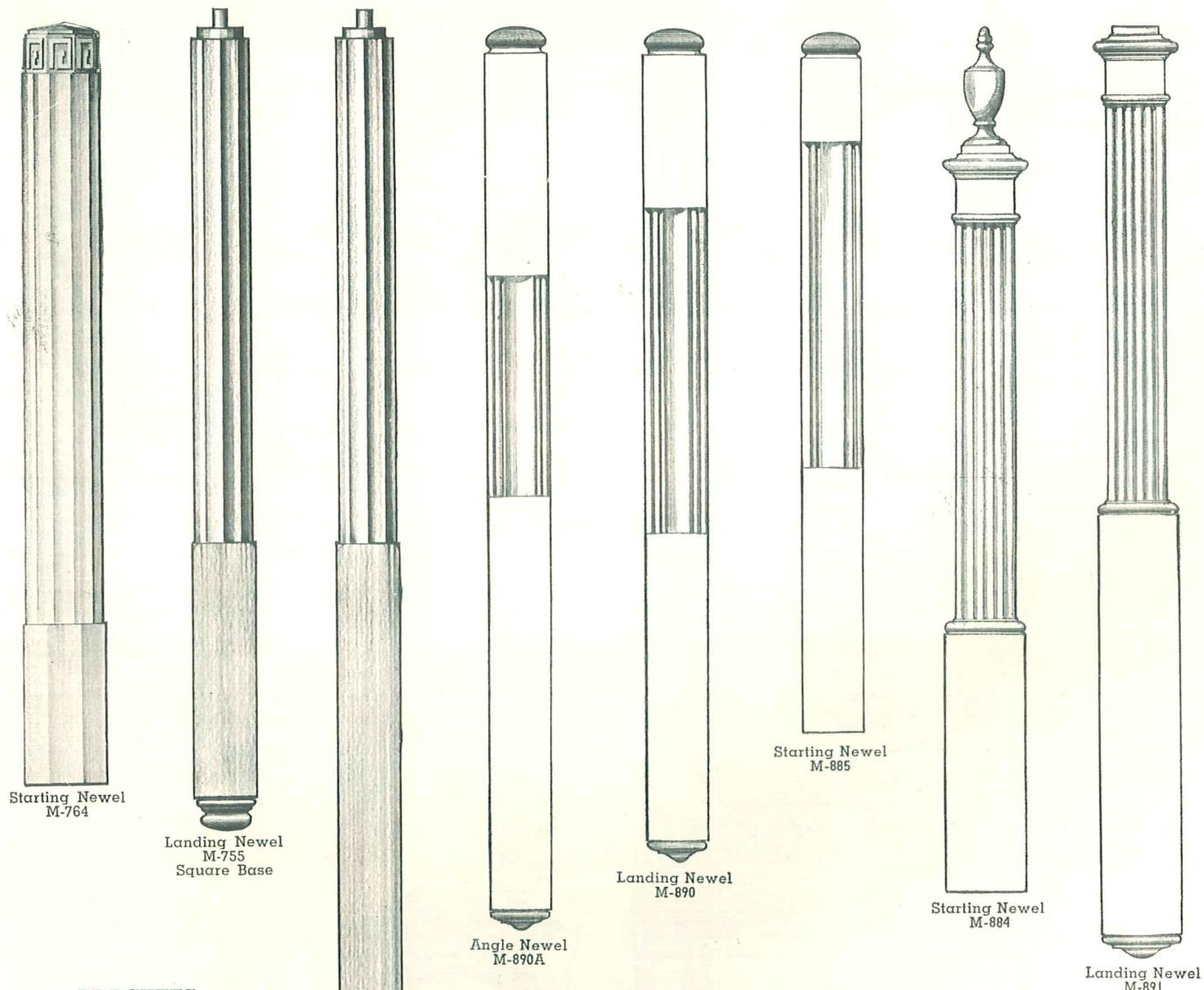
BIRCH, Unselected for Color

M-753—Starting,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ , 3'-2" long...  
 M-754—Starting,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ , 3'-10" long...  
 M-765—Starting,  $2\frac{1}{4}''$  Diam., 4'-0" long...  
 M-766A—Starting,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ , 3'-6" long...  
 M-767A—Landing,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ , 5'-3" long...  
 M-768A—Half Landing,  $1\frac{5}{8}'' \times 3\frac{1}{4}''$ , 5'-3" long...  
 M-769—Angle,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ , 7'-0" long....

M-770—Starting, 3"x3", 4'-2" long.....  
 M-771—Starting, 3"x3", 4'-10" long.....  
 M-772—Landing, 3"x3", 5'-6" long.....  
 M-773—Half Landing,  $1\frac{1}{2}'' \times 3''$ , 5'-3" long...  
 M-774—Angle, 3"x3", 5'-10 $\frac{3}{8}$ " long.....  
 M-775—Angle, 3"x3", 7'-0" long.....  
 M-895—Starting, 3 $\frac{1}{4}$ " Diam., 4'-0" long...

M O R G A N *Authentic* S T A I R W O R K

NEWEL POSTS—BALUSTERS—For M-720 Rail  $2\frac{1}{4}'' \times 2\frac{3}{8}''$



**BRACKETS**

BIRCH, Unselected for Color



M-882— $13'' \times 8\frac{1}{4}'' \times \frac{3}{8}''$ , 3-Ply



Angle Newel  
M-756  
Square Base

**MORGAN**

BIRCH—Unselected for Color

M-755 —Landing,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ ,  $3'-8\frac{1}{4}''$  long

M-756 —Angle,  $3\frac{1}{4}'' \times 3\frac{1}{4}''$ ,  $5'-3\frac{1}{2}''$  long

M-764 —Starting,  $5\frac{1}{4}'' \times 5\frac{1}{4}''$ ,  $4'-0''$  long

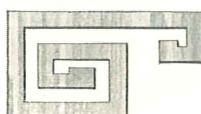
M-884 —Starting,  $5\frac{3}{4}'' \times 5\frac{3}{4}''$ ,  $5'-2''$  long

M-885 —Starting,  $4\frac{1}{4}'' \times 4\frac{1}{4}''$ ,  $4'-2''$  long

M-890 —Landing,  $4\frac{1}{4}'' \times 4\frac{1}{4}''$ ,  $4'-11\frac{1}{2}''$  long

M-890A—Angle,  $4\frac{1}{4}'' \times 4\frac{1}{4}''$ ,  $5'-4\frac{1}{2}''$  long

M-891 —Landing,  $5\frac{3}{4}'' \times 5\frac{3}{4}''$ ,  $5'-6\frac{3}{4}''$  long



M-784— $9\frac{3}{8}'' \times 4\frac{7}{8}'' \times \frac{1}{8}''$ , 3-Ply

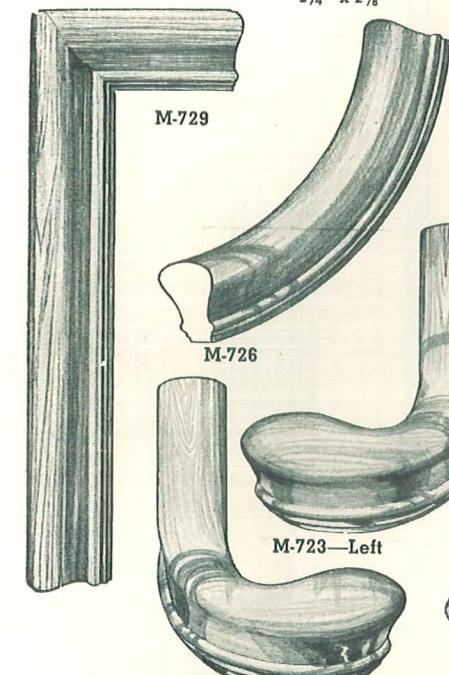
# MORGAN *Authentic* STAIRWORK

## COLONIAL STAIRWORK FITTINGS COLONIAL STAIR PARTS FOR USE WITH M-720 RAIL

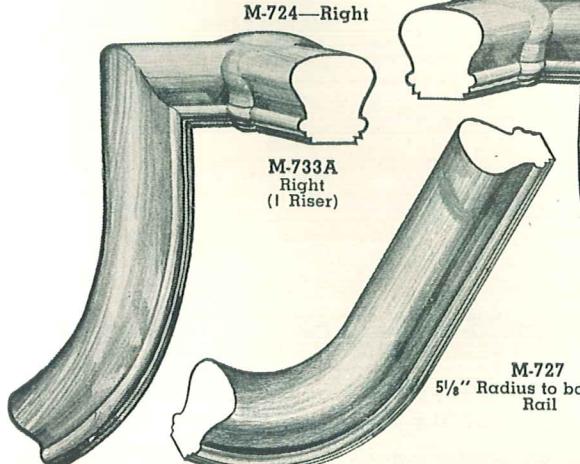
BIRCH (Unselected for Color)

All Stair Crooks on this and the following page are made to match M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ ) and furnished in Unselected Birch only. Necessary Rail bolts are included and packed in cartons containing Volutes, Goose Necks, etc.

SEE PAGE 14 FOR COMPLETE MEASUREMENTS.



M-720 RAIL  
 $2\frac{1}{4}'' \times 2\frac{3}{8}''$



M-729  
Right (1 Riser)

$5\frac{1}{8}''$  Radius to bottom of Rail

Detail Sheets Are Included in the Cartons with Each Volute and Turnout

M-718 Volute with Easement Fitted (Left)...	M-728 Convex Easement
M-719 Volute with Easement Fitted (Right)...	M-729 Straight Goose Neck (Two Risers)...
M-720 Stair Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ ) .....	M-730 Goose Neck (1 Riser without Cap for Turned Newel) .....
M-721 Volute with Easement Fitted (Left)...	M-731 Goose Neck (2 Risers without Cap for Turned Newel) .....
M-722 Volute with Easement Fitted (Right)...	M-733 Goose Neck (1 Riser with Newel Cap) .....
M-723 Turnout Easing with Cap (Left).....	M-733A Goose Neck (1 Riser with Cap and Level Outlet, Right) .....
M-724 Turnout Easing with Cap (Right).....	M-733B Goose Neck (1 Riser with Cap and Level Outlet, Left) .....
M-725 Easement with Newel Cap.....	
M-726 Concave Easement .....	
M-727 Concave Easement, 90 degrees.....	

M-718 Volute with Easement Fitted (Left)...	M-728 Convex Easement	M-733C Goose Neck (1 Riser with Cap and Level Outlet, Straight) .....
M-719 Volute with Easement Fitted (Right)...	M-729 Straight Goose Neck (Two Risers)...	M-734 Goose Neck (2 Risers with Newel Cap) .....
M-720 Stair Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ ) .....	M-730 Goose Neck (1 Riser without Cap for Turned Newel) .....	M-745 Level Quarter Turn .....
M-721 Volute with Easement Fitted (Left)...	M-731 Goose Neck (2 Risers without Cap for Turned Newel) .....	M-746 Newel Cap ( $3\frac{3}{8}''$ Diameter) .....
M-722 Volute with Easement Fitted (Right)...	M-733 Goose Neck (1 Riser with Newel Cap) .....	M-747 Newel Cap ( $3\frac{3}{8}''$ Diameter, 1 Rail Outlet) .....
M-723 Turnout Easing with Cap (Left).....	M-733A Goose Neck (1 Riser with Cap and Level Outlet, Right) .....	M-748 Newel Cap ( $3\frac{3}{8}''$ Diameter, 2 Rail Outlets Opposite) .....
M-724 Turnout Easing with Cap (Right).....	M-733B Goose Neck (1 Riser with Cap and Level Outlet, Left) .....	M-749 Newel Cap ( $3\frac{3}{8}''$ Diameter, 2 Rail Outlets Right Angle) .....

**MORGAN**

# MORGAN *Authentic* STAIRWORK

## COLONIAL STAIRWORK FITTINGS

### COLONIAL STAIR PARTS FOR USE WITH M-720 RAIL

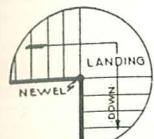
BIRCH (Unselected for Color)

All Stair Crooks on this and the preceding page are made to match M-720 Rail ( $2\frac{1}{4}'' \times 2\frac{3}{8}''$ ) and furnished in Unselected Birch only. Necessary Rail bolts are included and packed in cartons containing Volutes, Goose Necks, etc.

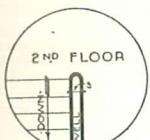
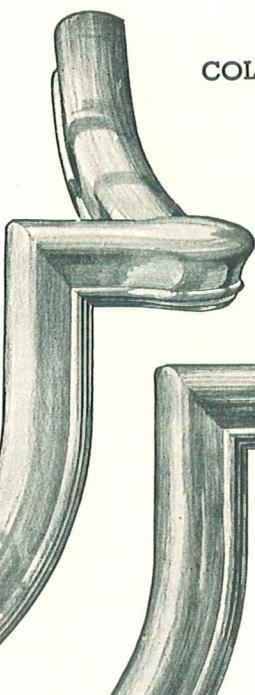
SEE PAGE 14  
FOR COMPLETE MEASUREMENTS

Morgan Stair Parts are made by skilled artisans and represent the ultimate in precision workmanship.

All Morgan  
Stair Parts  
Are Packed  
in Strong  
Trademarked  
Cartons

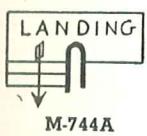


M-741—Left  
(2 Riser)



M-744

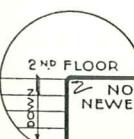
M-744—Right  
(1 Riser)  
M-744A—Right  
(2 Riser)



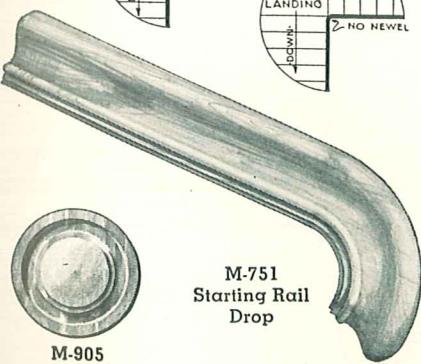
M-744A



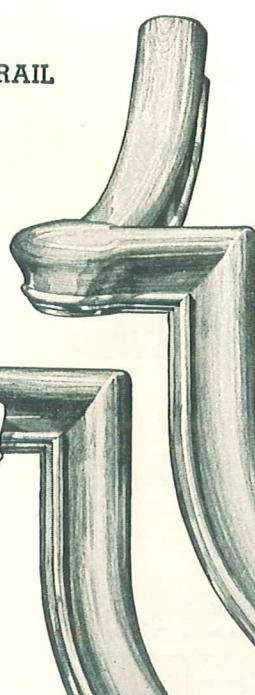
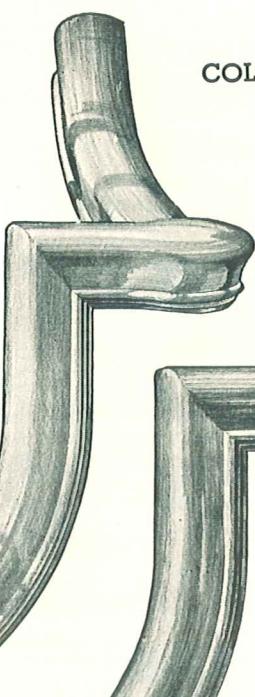
M-739—Right  
(1 Riser)  
M-740—Right  
(2 Riser)



M-751  
Starting Rail  
Drop



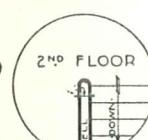
M-905



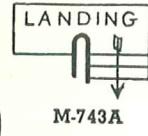
M-742—Right  
(2 Riser)



M-743—Left  
(1 Riser)  
M-743A—Left  
(2 Riser)

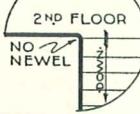


M-743

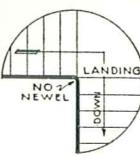
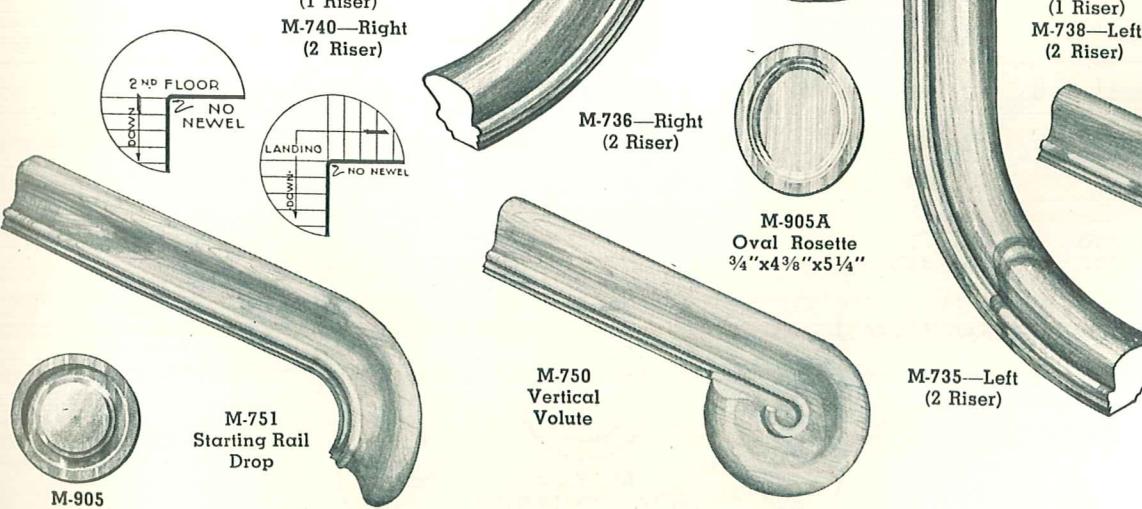


M-743A

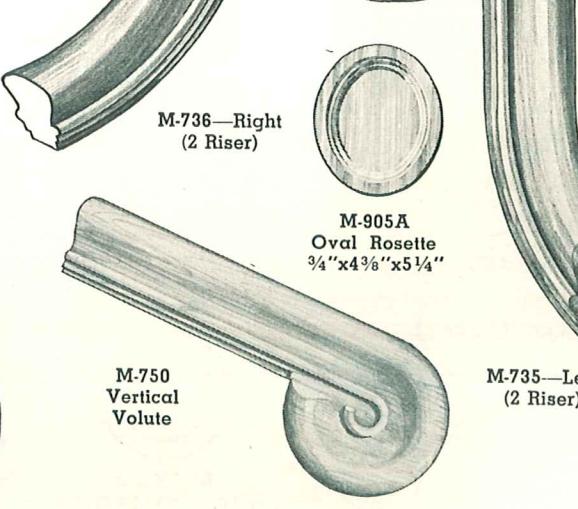
M-737—Left  
(1 Riser)  
M-738—Left  
(2 Riser)



M-752  
Starting Rail  
Drop



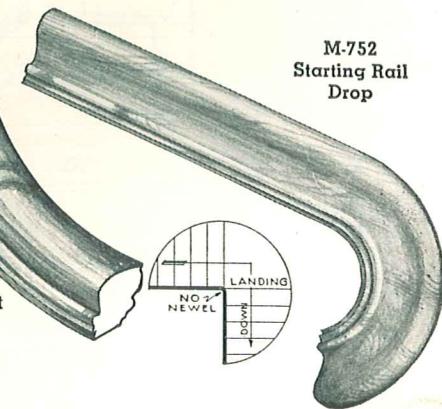
M-752



M-905A  
Oval Rosette  
 $\frac{3}{4}'' \times 4\frac{3}{8}'' \times 5\frac{1}{4}''$

M-750  
Vertical  
Volute

M-735—Left  
(2 Riser)

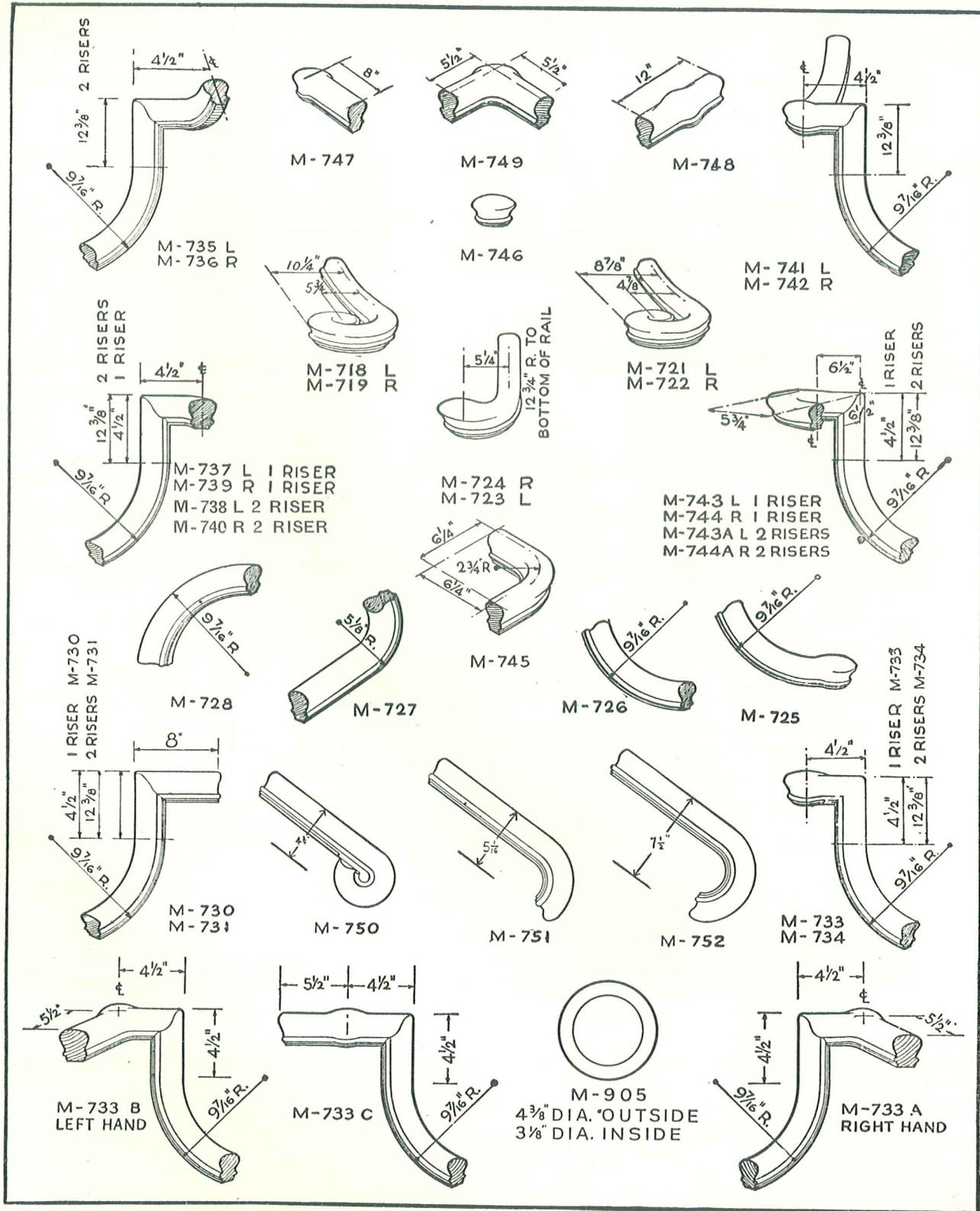


M-735	Goose Neck (2 Risers, Quarter Turn and Easement, no cap, Left)	M-740	Goose Neck (2 Risers, Level Quarter Turn, no cap, Right)
M-736	Goose Neck (2 Risers, Quarter Turn and Easement, no cap, Right)	M-741	Goose Neck (2 Risers, Cap and Easing, Left)
M-737	Goose Neck (1 Riser, Level Quarter Turn, no cap, Right)	M-742	Goose Neck (2 Risers, Cap and Easing, Right)
M-738	Goose Neck (2 Risers, Level Quarter Turn, no cap, Left)	M-743	Goose Neck (1 Riser, Landing Return, Left)
M-739	Goose Neck (1 Riser, Level Quarter Turn, no cap, Right)	M-743A	Goose Neck (2 Risers, Landing Return, Left)

M-744	Goose Neck (1 Riser, Landing Return, Right)
M-744A	Goose Neck (2 Risers, Landing Return, Right)
M-750	Vertical Volute
M-751	Starting Rail Drop
M-752	Starting Rail Drop
M-905	Rosette
M-905A	Oval Rosette

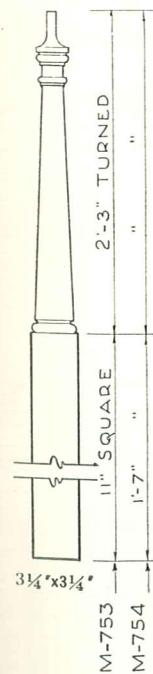
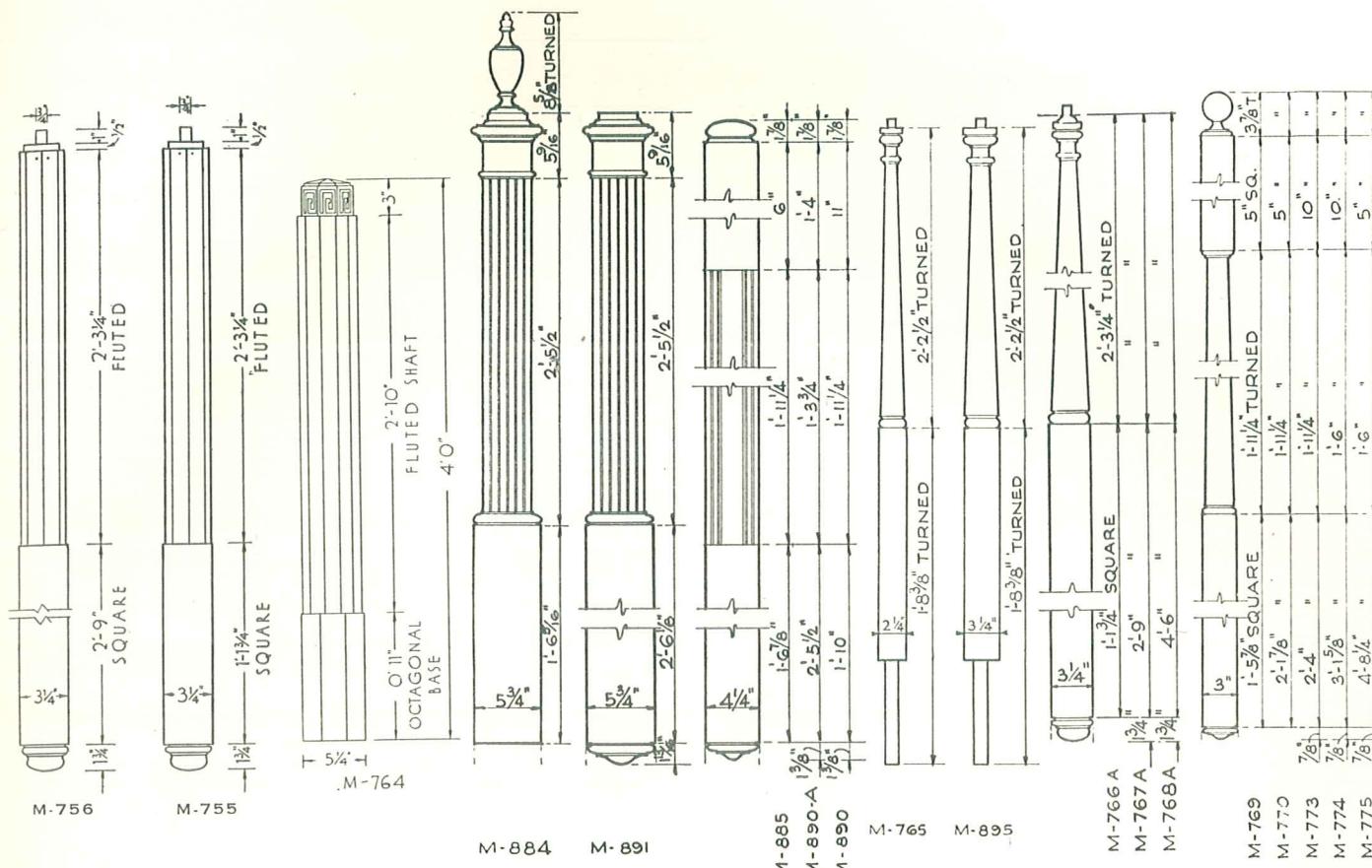
M O R G A N *Authentic* S T A I R W O R K

DETAILS OF MORGAN AUTHENTIC STAIR PARTS

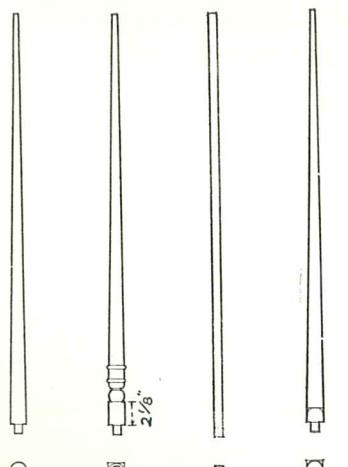


# MORGAN *Authentic* STAIRWORK

## DETAILS OF MORGAN AUTHENTIC STAIR PARTS



BALUSTERS ARE FURNISHED IN LENGTHS  
30"-33"-36"-42" Overall,  
M-777 has 3/4" Dowel Pin turned on bottom.  
Other designs are Dovetailed.



Starting Steps  
M-779T, M-779V,  
and M-896  
include—

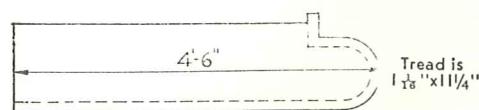
TREAD, as shown  
opposite cut of  
each.

RISER, 3/4" x 7"  
COVE, 1/2" x 1/16"

All furnished  
Knock-Down, eas-  
ily put together.

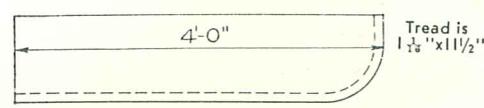
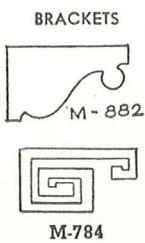


M-905A  
Oval Rosette  
3/4" x 4 3/8" x 5 1/4"



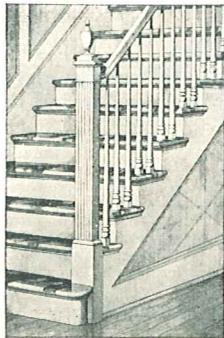
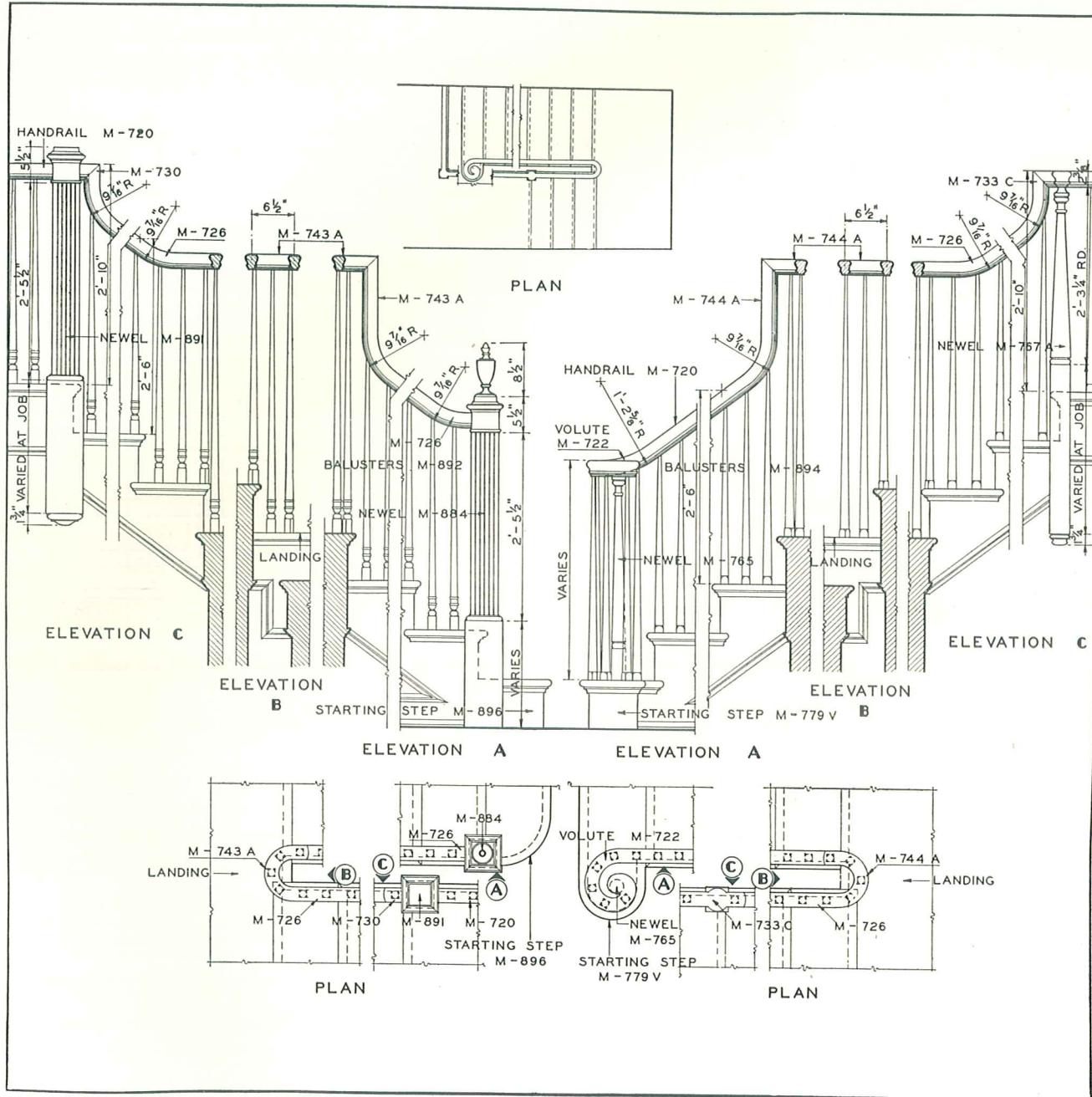
M-779V Bored for Volute M-721—M-722

M-779T Bored for Turnout M-723—M-724



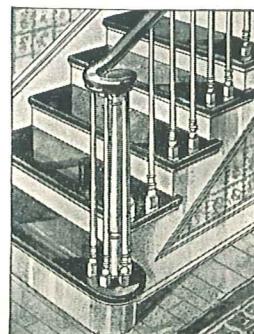
M-896

M O R G A N *Authentic* S T A I R W O R K

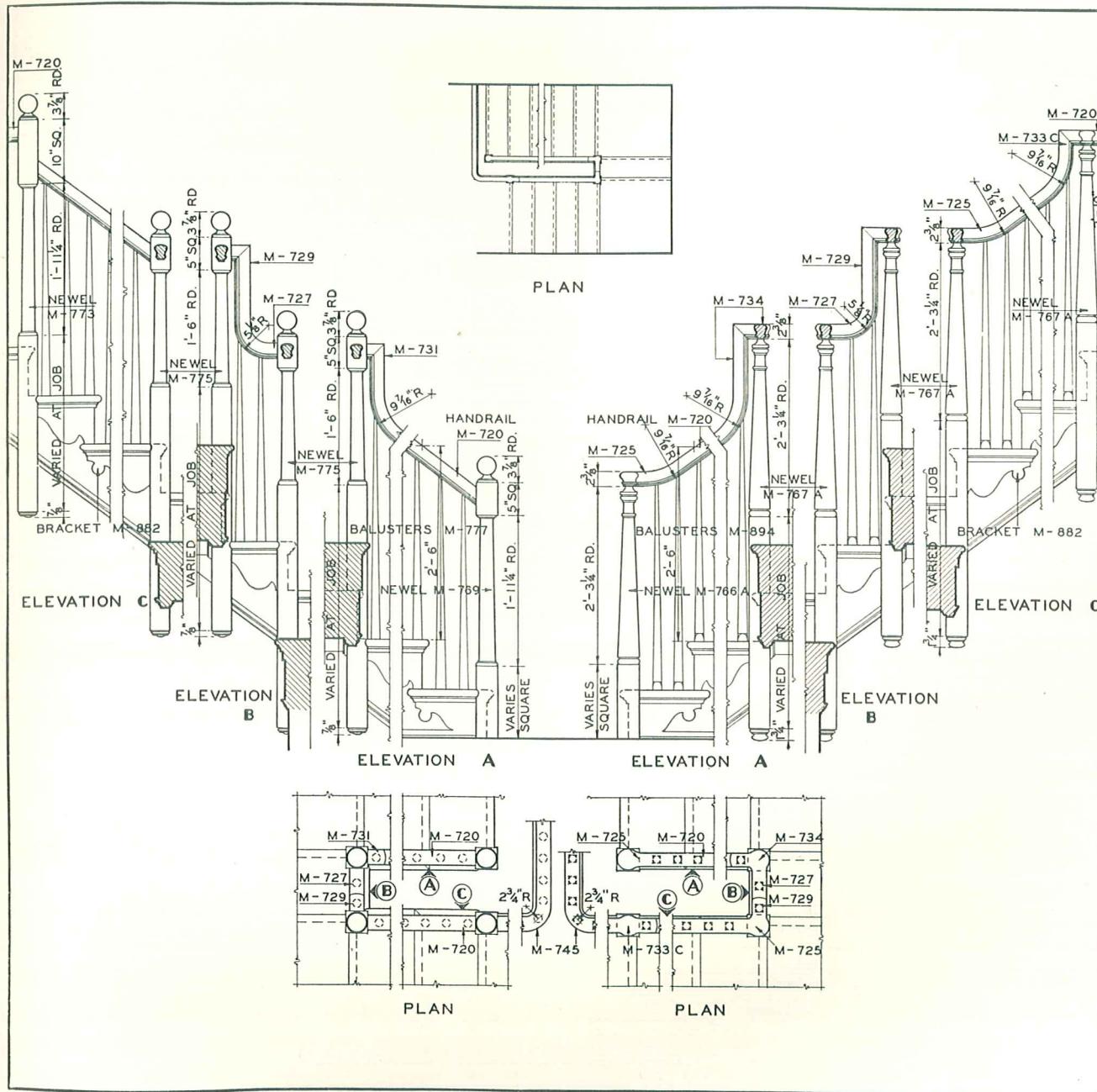


MORGAN AUTHENTIC STAIR PARTS

A Detailed Cutting Chart is included in the carton with each Morgan Starting Step. By following the simple instructions given on the chart, the Stair builder will find the erection of a Morgan Stairway greatly simplified.

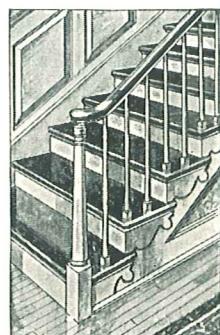


M O R G A N *Authentic* S T A I R W O R K

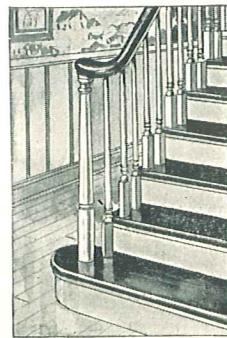
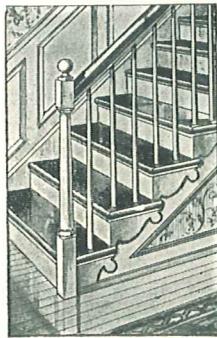
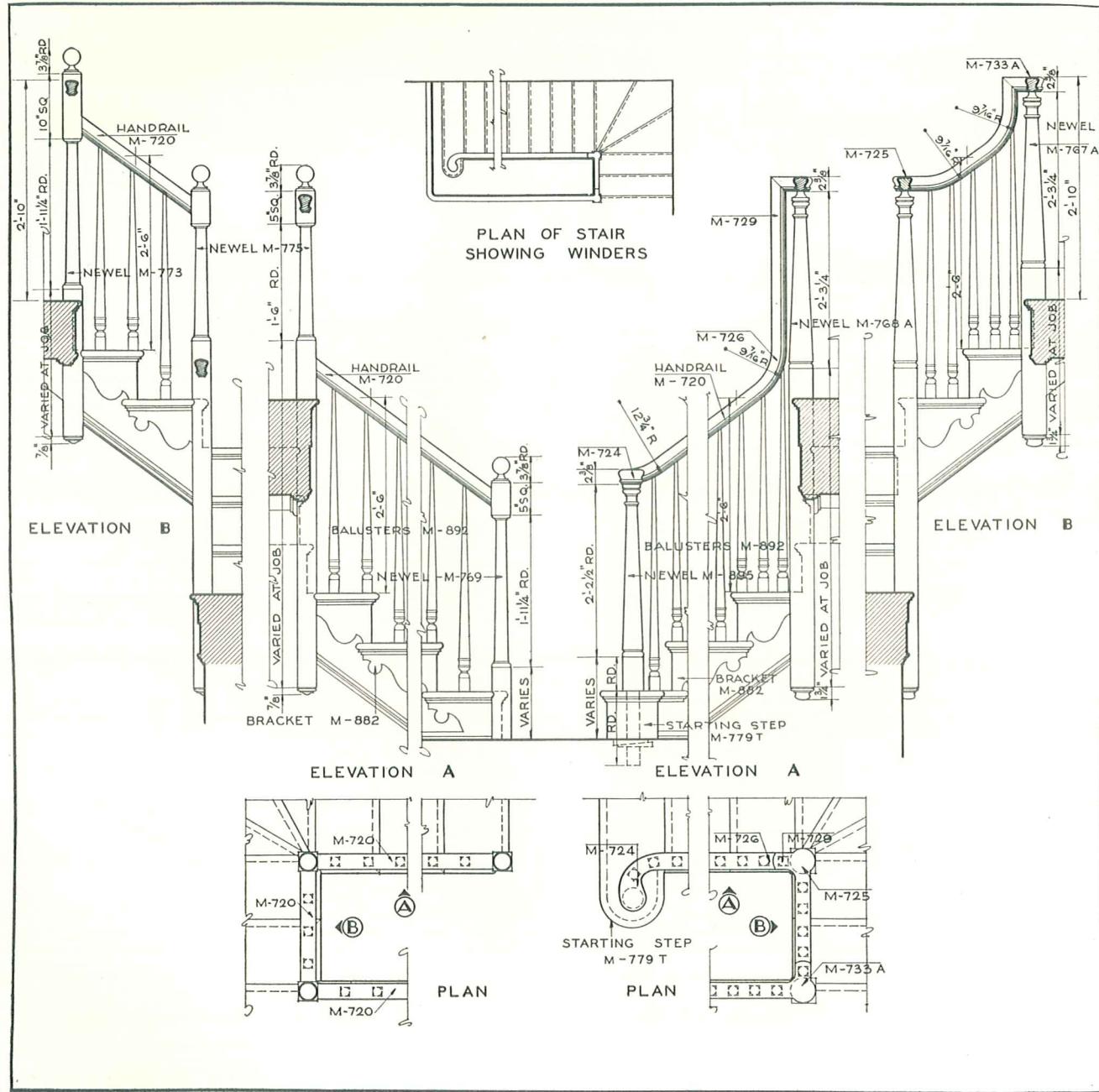


MORGAN AUTHENTIC STAIR PARTS

All Morgan Stair parts are packed in Strong Trade-marked Cartons and are delivered to the Stair builder in perfect condition, ready to be fitted. Demand genuine Morgan made and Morgan guaranteed Stairwork.



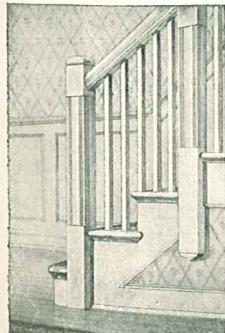
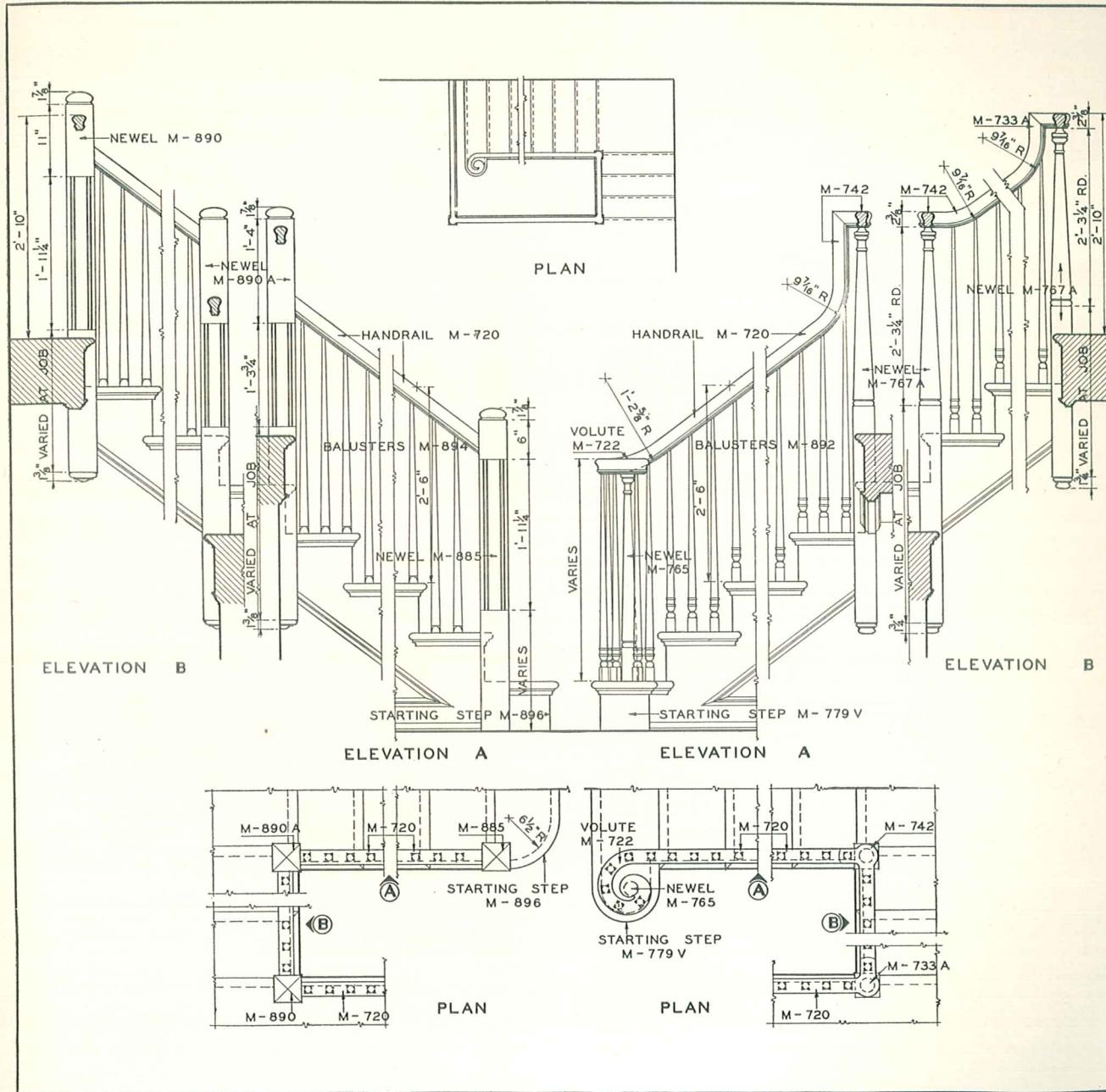
# M O R G A N   *Authentic*   S T A I R W O R K



## MORGAN AUTHENTIC STAIR PARTS

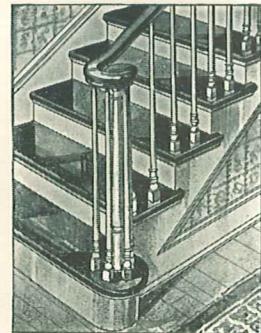
On this and the following pages are shown plans and elevations of Stairways, illustrating the use of Morgan Authentic Stairwork.

M O R G A N      *Authentic*      S T A I R W O R K



MORGAN AUTHENTIC STAIR PARTS

Morgan Stair parts are precision made. Each Fitting is machined to exact detail, assuring perfect match of all adjoining parts.



# The MORGAN CUTTING CHART

**MORGAN CO., Oshkosh, Wis.**  
MANUFACTURERS

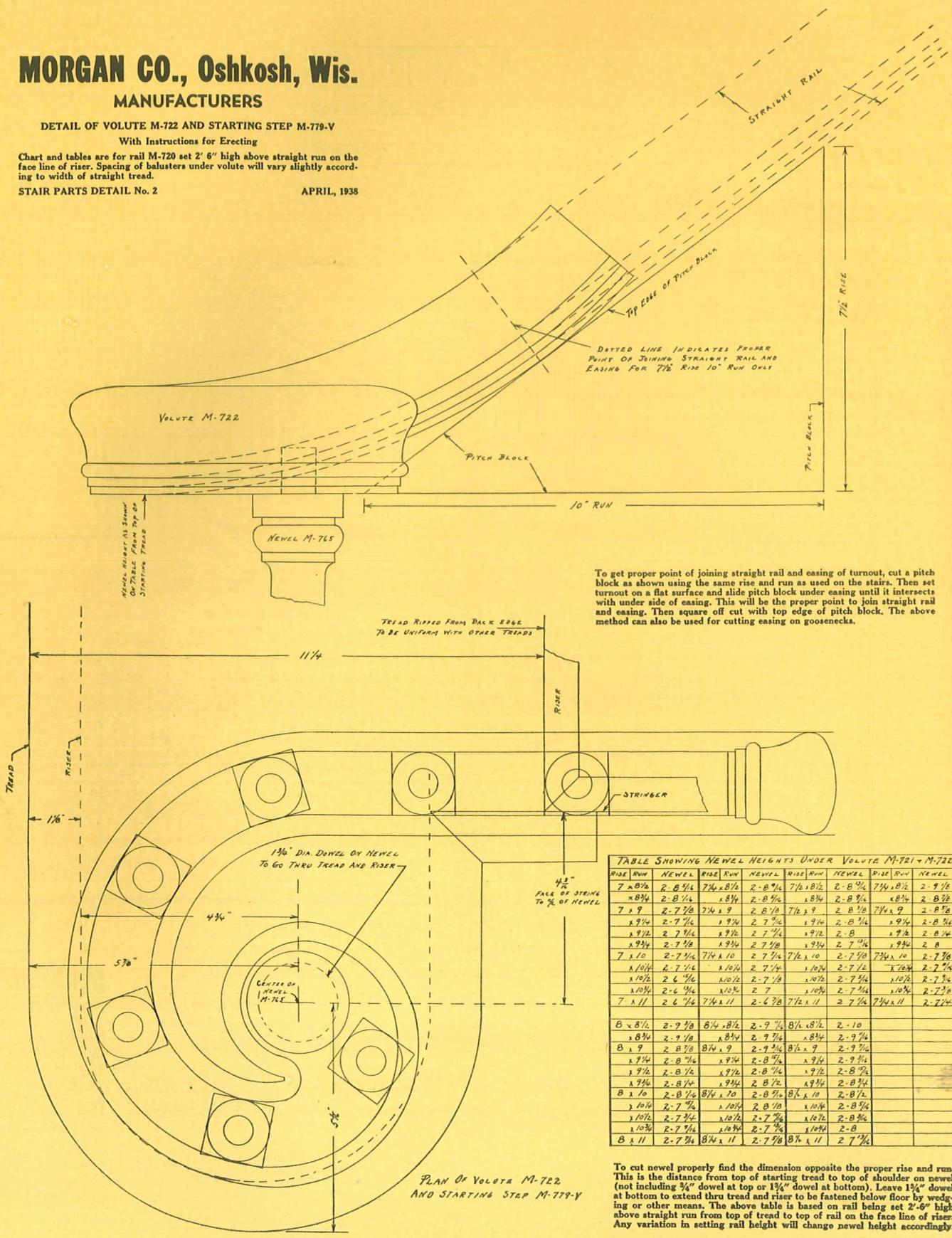
## DETAIL OF VOLUTE M-722 AND STARTING STEP M-779-V

With Instructions for Erecting

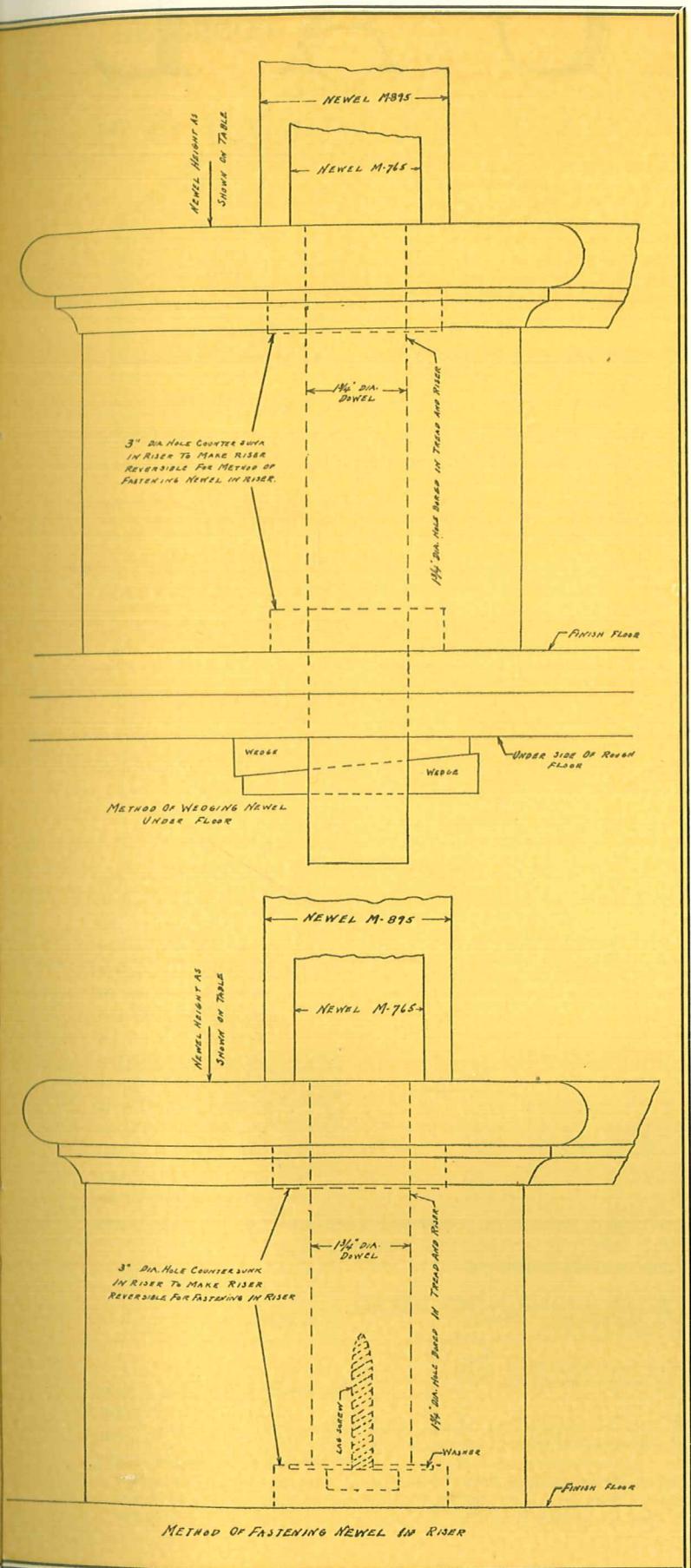
Chart and tables are for rail M-720 set 2' 6" high above straight run on the face line of riser. Spacing of balusters under volute will vary slightly according to width of straight tread.

STAIR PARTS DETAIL No. 2

APRIL, 1938



# ART AND INSTRUCTION SHEET



## HOW TO CUT RAIL EASEMENTS TO FIT ANY RISE AND RUN — ASSEMBLE PARTS

Shown to the left is a copy of the Morgan cutting chart and Instruction Sheet, furnished full size, with each Volute and Turn-out Easement. Its value to the stair builder is obvious. Instructions show how to cut easements to the rise and run of stairs; cut and secure newels; space balusters, etc.

A careful study of this detail and the other informative drawings in this book will help materially anyone engaged in stair building.



MORGAN VOLUTE M-722

### The Morgan Volute Is a True Volute!

Here is architectural perfection! A superb quality of design such as characterizes all Morgan Stairwork. This is a true volute\*—a geometric spiral scroll with rail rising on the turn.

The ordinary volute as we would say in the woodworker's craft is much too "woody." Furthermore, you will notice that the rise from the cap of the ordinary volute usually is abrupt and awkward.

The graceful rail contour of Morgan Volute M-722 matches exactly Morgan straight rail M-720. When cut as directed on the printed cutting chart, which is furnished with Morgan easements, the Morgan Volute will conform to the rise and run of any standard stairway.

\*Volute—A Spiral Scroll—Webster's Dictionary.

# MANUAL

## STAIR BUILDING INFORMATION

### RULES USUALLY FOLLOWED IN BUILDING STANDARD TYPES OF RESIDENCE STAIRWAYS

This manual is a compilation of the work of experts, long in the stair building craft, well known residence architects and Morgan skilled artisans. No attempt is made to discuss the more intricate and difficult scroll or circular types of stairs which in most cases require special or made-to-order parts, and are used generally in the larger and more costly dwellings. This manual is for use in laying out and building the simpler types of stairs used in the average moderately priced American home.

By following the simple age-old fundamental rules carefully, a good result is assured. A sound, safe and "easy" Stairway of graceful design is the objective of every stair builder and is accomplished in good time and with greater assurance when Morgan stock stairparts are used and assembled according to these time tested rules.

The methods and rules that follow have come to be accepted generally among craftsmen and stair designers as standard.

#### FRAMING

Framing the stairway varies in method to such an extent thruout the country that no attempt is made here to submit definite standards.

#### SECTION OF STAIRCASE

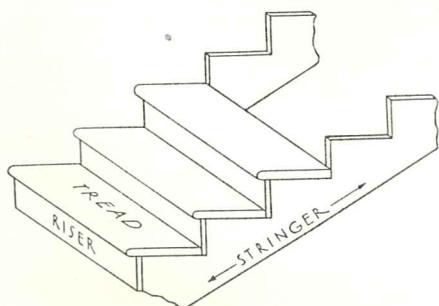


FIG. 10—STAIR PARTS

Obviously the tread is the most essential part of the staircase as it affords a footing. However, the treads are useless without the supporting stringers. Stringers support the treads just as joists support the floor. A stair may have two stringers in the average small stairway, but three stringers are preferred.

#### SECURING STRINGER

One method of fitting the top of the stringer against the floor joists of the landing is to cut stringer over a piece of 2 x 4 scantling which is nailed to the side of the trimmer joist so that the top of the highest step of the stringer comes flush with the top of the joist

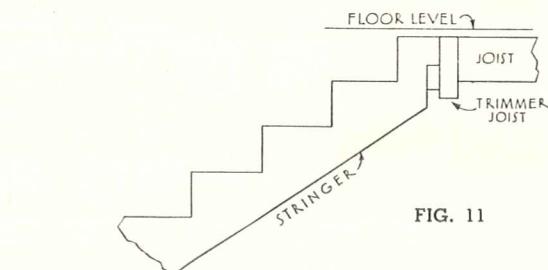


FIG. 11

as shown in Fig. 11. In Fig. 12 is shown another method of securing the stringer at the top against the trimmer joist at floor or land-

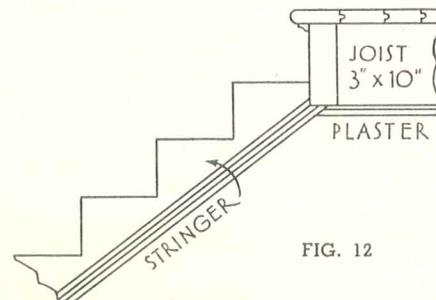


FIG. 12

ing. In this case the trimmer joist is so placed that the joist itself forms the support for the back of the topmost riser.

#### PLAIN AND HOUSED STRINGERS

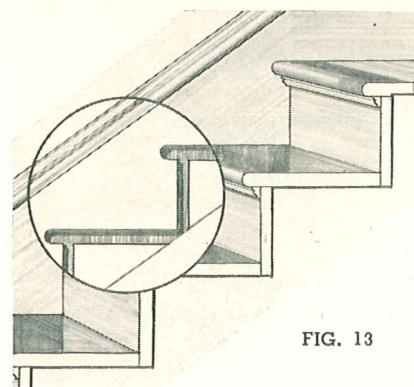


FIG. 13

A plain stringer (see Fig. 10) while suitable for use in the small home does not provide the squeak free sturdiness or "finish" of a housed stringer which is most generally recommended. A housed stringer is made with horizontal and vertical grooves cut  $1/2$ " deep on the inside of the

stringer to receive the treads and risers (see Fig. 13)—the treads and risers are wedged from beneath with glue covered wedges thus assuring a tight job.

#### RISER AND NOSING DETAIL

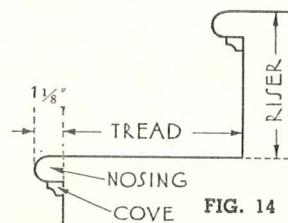


FIG. 14

The height of the riser is from top of tread to top of tread. The width of tread is from face of riser to face of riser

# MORGAN *Authentic* STAIRWORK

## HEADROOM



FIG. 15

Headroom is the distance or clearance above a stair measured from outside corner of the tread and riser directly underneath the lowest point of the soffit or ceiling overhead.

If two or more flights of stairs are arranged one above the other in the same stair well (for example, cellar stairs under, or attic stairs over, the main staircase), the question of adequate headroom underneath the upper stair is introduced into the planning problem and must be considered most carefully. It has been found from studies of the dimensions of the average man or woman that this headroom, measured vertically from top of tread at face of riser up to the under side of the stair above, varies with the steepness of the stair, but is generally from 7 feet 4 inches to 7 feet 7 inches.

This allows for the arm to be swung up over the head without hitting anything. While the minimum required by F. H. A. is 6 feet 6 inches it is not sufficient for the main stair which, as stated above, should be from 7 feet 4 inches to 7 feet 7 inches.

## RISE AND RUN

It is of vital importance that the stairway be built with the proper rise and run. If one of the three rules described below is used, the stairway will be easy to ascend and safe to descend.

If the rise is too steep the person ascending the stairs will be subjected to unnecessary strain. This is a very serious matter for elderly persons, and also for others who may be physically handicapped.

The stairway should definitely be built to provide the maximum ease in both ascending and descending. Such a stairway is easy to build with Morgan stock parts and at the same time it will be graceful and charming because Morgan stair parts are correctly designed and precision-made to fit together perfectly.

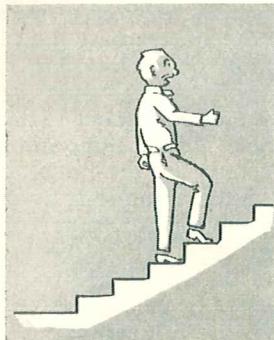


Fig. 16—Tread too wide, riser too short.



Fig. 17—Tread too narrow, riser too high.

### RULE No. 1

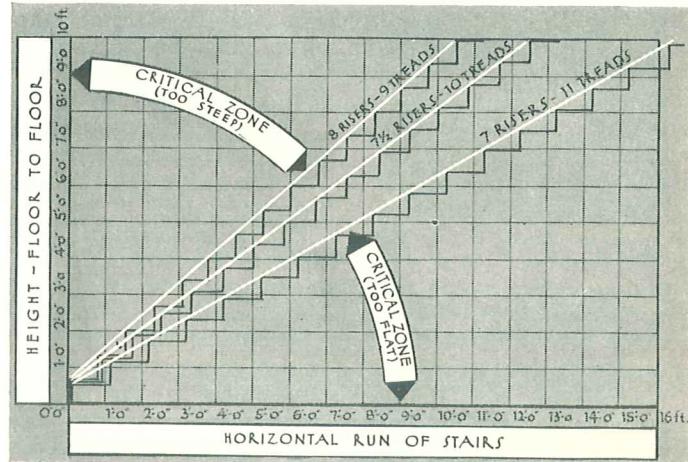
The sum of 2 risers and 1 tread should be between 24 and 25. Thus a 7 to 7½ inch riser with 10 inch to 11 inch tread would be acceptable. (See Fig. 18.)

For the main staircase in a house, risers should not be higher than 7½ inches, and not less than 7 inches, combined with a tread width (face to face of risers and not including nosing) of 10½ to

11 inches. Risers for attic and cellar stairs may, if necessary, be as high as 9 inches (see Fig. 17) although this extreme height is very undesirable and should be used only when it is unavoidable.

The height from floor to floor is usually fixed by considerations independent of the stairs. It is, then, evident that the higher the riser in the stair, the fewer risers and treads will be required, and the fewer treads there are, the less space the stairs will occupy. This is why attic and cellar stairs frequently have high risers and narrow treads.

Knowing the height from floor to floor in inches, this height is divided by 7 inches, and usually gives a whole number and a frac-



RISER AND TREAD CHART

tion. For example, if the height, floor to floor, is 9 feet (108 inches) divided by 7 inches, the result is 15 3/7. This gives the number of risers required so as to have a riser height of about 7 inches.

In the above case 15 risers will be needed. Dividing the floor-to-floor height of 108 inches by 15 gives the riser height of 7 3/16 inches.

Knowing the height of the risers, the width of the treads (from face to face of risers) can be determined by applying one or all of the three rules quoted. If there are 15 risers, there will be 14 treads, because the number of treads is always just one less than the number of risers. Not counting landing tread if used.

The width of tread selected (10 inches) multiplied by the number of treads (14 in this case) gives the run of the stair from the face of the first riser at the bottom to the face of the last riser at the top.

In the case being considered, this run will be 14 x 10 inches, which equals 140 inches, or 11 feet and 8 inches. If this run is too great for the space available, the width of each tread might be reduced a very little, without violating one of the three rules quoted.

If the run is still too much, try reducing the number of risers to 14 and the number of treads to 13. The height of each riser will then be 108 inches divided by 14, which is 7 5/7 inches (still within allowable limits) calling for a width of tread of 10 inches. The run of the stair is thus reduced to 13 x 10 inches, which is 130 inches or 10 feet and 10 inches.

### RULE No. 2

The sum obtained by adding the width of one run and the height of one riser in inches should be 17 to 18. Thus a 10 inch tread and a riser from 7 to 8 inches high, or an 11 inch tread and a riser from 6 to 7 inches high would be acceptable according to this rule. Rule 3, however, should be used as a check on this rule and if this were done the 10 inch tread with 8 inch riser would be ruled out because the product is too much, being 80, while the 11 inch tread and 6 inch riser would be ruled out (see Fig. 16), because the product is too little, being only 66. However, this latter proportion would be suitable for outside steps to a public building.

### RULE No. 3

The product obtained by multiplying the height of the riser (from tread to tread) in inches, by the width of the tread (from face to face of risers) in inches, should be between 70 and 75. Thus, either a 10 inch tread and a 7 inch riser, or a 9 inch tread and an 8 inch riser would be acceptable. A better rule is to make this product equal to at least 75, which would eliminate the 9 inch tread with 8 inch riser, as these dimensions do not result in a good stair, though in some cases acceptable for attic or cellar stairs.

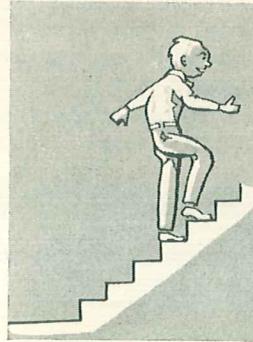


Fig. 18—Correct tread width 10 1/2", correct riser height 7 1/2".

# M O R G A N      *Authentic*      S T A I R W O R K

## STAIR WIDTHS

The width of a staircase is determined by the necessity for two people to be able to pass comfortably on the stairs, and the fact that furniture will, at some time or other, have to be carried up or down. One person could with reasonable comfort use a stair 2 feet wide, but if two people are to be allowed to pass on the stairs, the width must be at least 3 feet,  $3\frac{1}{2}$  feet is even more desirable. See Fig. 19.

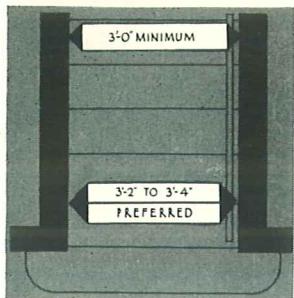


FIG. 19

The width necessary for the passage of furniture depends upon the type of furniture which it is reasonable to expect will have to be taken up the stairs.

Stairs which are open on one side, including open-well stairs, offer the best opportunity for getting large pieces of furniture up, because they can usually be raised up over the handrails and newel posts.

Stairs of the "narrow U" type, Fig. 33, or closed string stairs are the most difficult from the point of view of moving, especially if there are winders. Furniture must be maneuvered to clear the width inside of all obstructions (such as newels, etc.) required for both narrow and wide U-type stairs under different headroom conditions.

## HEIGHT OF RAIL

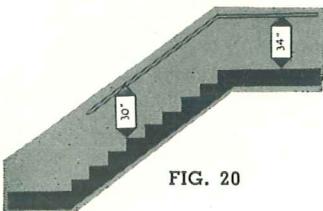


FIG. 20

It has been long established, the most comfortable hand rail height on the rake is 30" and on the landing 34". These rail heights are used in general practice universally. (See Fig. 20)

It is always desirable to use continuous hand rail from floor to floor thus providing security every step of the way between floors.

## We Recommend . . .

To stairbuilders, we recommend that you add to your library, "STAIR BUILDING" by Townsend, published by the American Technical Society, Chicago, Illinois.

## WINDERS

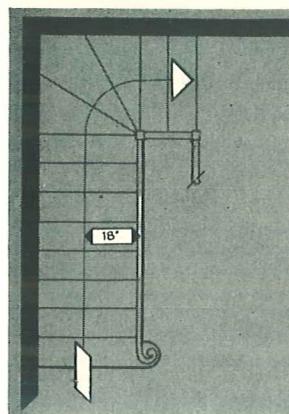


FIG. 21

Space limitations often make it difficult to "work in" a stair with landings, and in this case a device is frequently resorted to which is quite common practice BUT IS TO BE AVOIDED IF POSSIBLE. THIS DEVICE CONSISTS IN INTRODUCING INTO THE STAIR, AT THE TURNS, STEPS CALLED WINDERS, which are very wide at the outside and very narrow or even of no width at all at the inside, so that in making

the turn a person in ascending or descending the stair, falters and his gait or rhythm is dangerously off balance. This is because of a break in the normal run of the stairs.

The principal objection to winders is that at the inner corner where all the winders meet, there is very little, if any, width of tread left to support one's foot. Also, the risers are of the normal height and all come together at this point, which makes a very steep descent at the corner. This is dangerous, as it may be the cause of a bad fall. One disadvantage of this arrangement as in Fig. 21 is that when there is a long, straight winder, a misstep at the winder would mean a fall down the long flight. The safer arrangement would be to place the winders at the lower turn (Fig. 22) but this sometimes does not work out to give ample access to rooms above. In cases of this kind a choice must be made between two evils, or the plan must be made larger at increased cost.

One rule is that the tread of a winder, which comes at the inside of the turn, should not be less than three-quarters of the width of an ordinary stair tread. This rule is seldom observed, as it is impossible to do it at a square turn. An attempt to approach this requirement results in what is known as a geometrical stair, an example of which is shown in Fig. 23. A staircase of this kind has no newel posts at the turn of the stairs, but has the balustrade or hand rail following the curve.

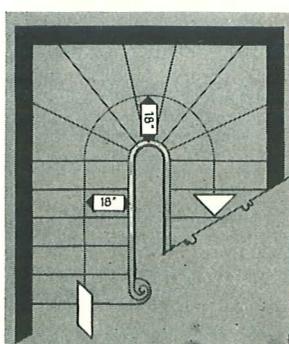


FIG. 22

## TYPES OF STAIRS AND LOCATION

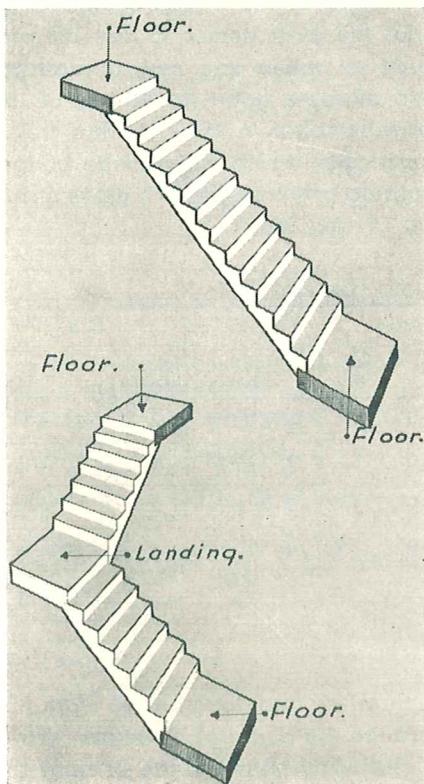


FIG.  
24

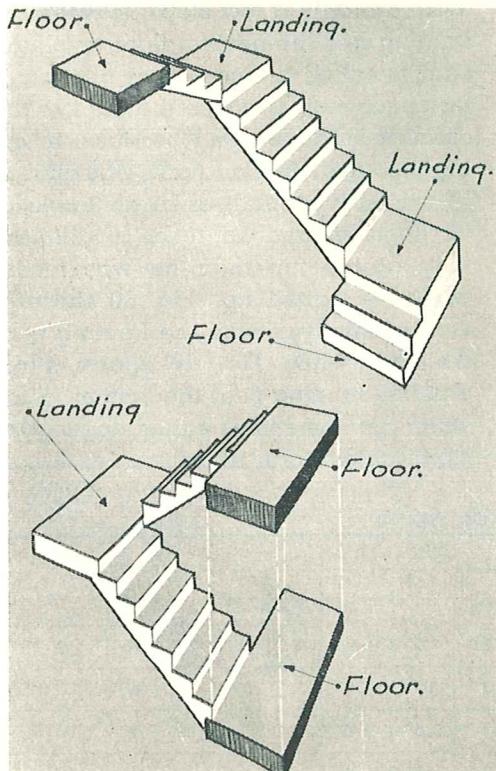


FIG.  
25

THIS chapter covers the standard types of stairs to be found in the average house. It does not include the highly specialized types of stairways usually "custom built" to architects specifications and furnished by a special mill. The standard types of stairs that follow are listed under names by which they are generally known in the trade.

### STRAIGHT STAIRS

The simplest and least costly type is the straight run stair. This type of stair leads straight from one floor to the next without turns or landing. Fig. 24 and Fig. 28 show the straight run of stair plan. As there are no landings, there will be at least 13 or 14 steps to climb without a break or rest, which makes the use of this type tiring.

Straight stairs may be built with a wall on each side as shown in Fig. 19 in which case they are called close string stairs; or they may have a wall on one side only. In this case they are called open string stairs and have one side open to the room or hallway so that a hand-rail or balustrade is necessary at the open side of the stairs, with newel posts at top and bottom. Occasionally a straight run stairway is built open on both sides with two balustrades. Straight stairs often require a long hallway, which is sometimes a disadvantage, especially in a small house.

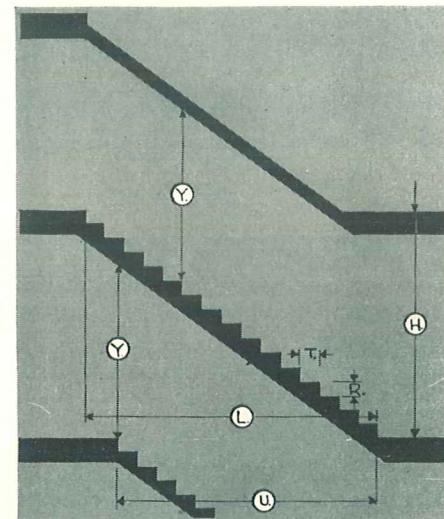


FIG. 28

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Treads T	Total Run L	Minimum Head Room Y	Well Opening U
8'-0"	12	8"	9"	8'-3"	6'-6"	8'-1"
	13	7 $\frac{3}{8}$ " +	9 $\frac{1}{2}$ "	9'-6"	6'-6"	9'-2 $\frac{1}{2}$ "
	13	7 $\frac{3}{8}$ " +	10"	10'-0"	6'-6"	9'-8 $\frac{1}{2}$ "
8'-6"	13	7 $\frac{7}{8}$ " -	9"	9'-0"	6'-6"	8'-3"
	14	7 $\frac{5}{16}$ " -	9 $\frac{1}{2}$ "	10'-3 $\frac{1}{2}$ "	6'-6"	9'-4"
	14	7 $\frac{5}{16}$ " -	10"	10'-10"	6'-6"	9'-10"
9'-0"	14	7 $\frac{11}{16}$ " +	9"	9'-9"	6'-6"	8'-5"
	15	7 $\frac{3}{16}$ " +	9 $\frac{1}{2}$ "	11'-1"	6'-6"	9'-6 $\frac{1}{2}$ "
	15	7 $\frac{3}{16}$ " +	10"	11'-8"	6'-6"	9'-11 $\frac{1}{2}$ "
9'-6"	15	7 $\frac{5}{8}$ " -	9"	10'-6"	6'-6"	8'-6 $\frac{1}{2}$ "
	16	7 $\frac{1}{8}$ "	9 $\frac{1}{2}$ "	11'-10 $\frac{1}{2}$ "	6'-6"	9'-7"
	16	7 $\frac{1}{8}$ "	10"	12'-6"	6'-6"	10'-1"

Note: Dimensions shown under well opening "U" are based on headroom 6'-6" minimum headroom. If headroom is increased well opening also increases.

STAIR WITH LANDING

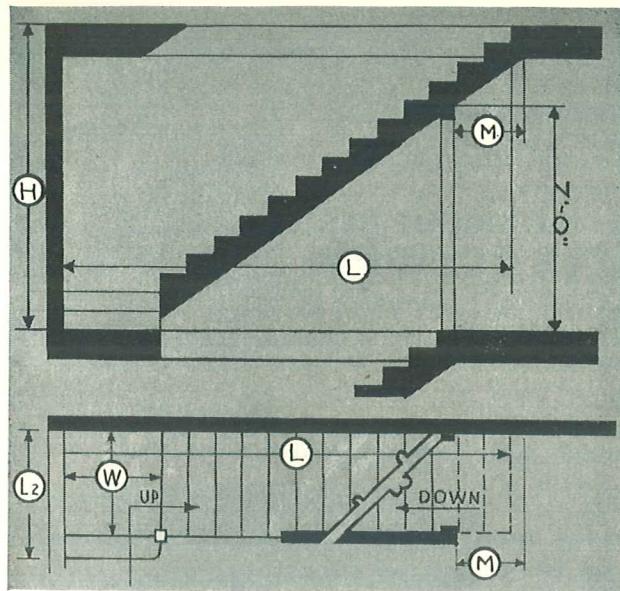


FIG. 29

"L" TYPE STAIRS

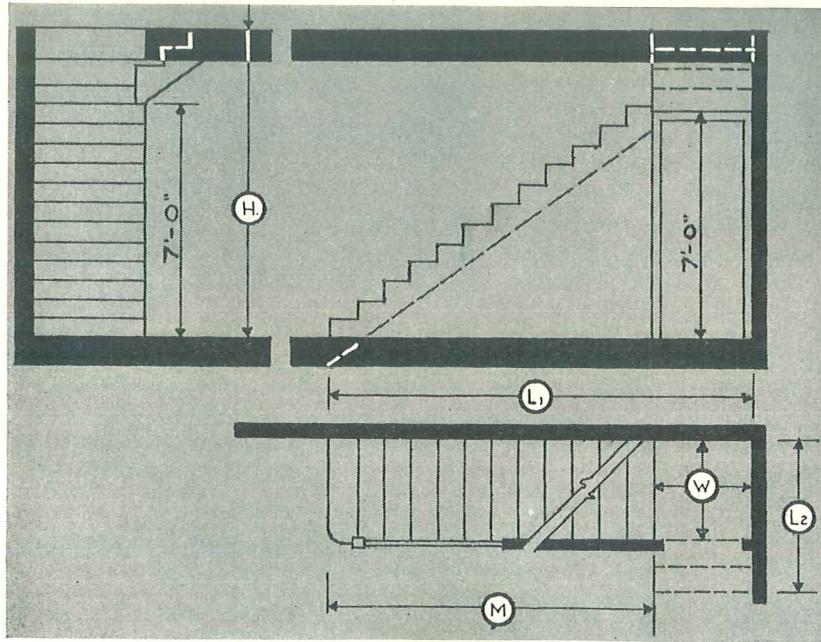


FIG. 30

In order to reduce the length of the space occupied by the staircase or to make the stair easier to use by providing a place on which to pause and rest, a platform or landing is introduced at some point in the run of the stair and usually the stair takes a turn at this point. Sometimes the stair is an open string stair at the bottom and changes, after mounting a few steps, to a close string stair, as shown in Figs. 29 and 30.

TABLE FOR FIG. 29

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Tread T	RUN		RUN	
				No. Risers	L	No. Risers	L2
8'-0"	13	7 $\frac{3}{8}$ " +	10"	11	8'-4" + W	2	0'-10" + W
8'-6"	14	7 $\frac{5}{16}$ " -	10"	12	9'-2" + W	2	0'-10" + W
9'-0"	15	7 $\frac{3}{16}$ " +	10"	13	10'-0" + W	2	0'-10" + W
9'-6"	16	7 $\frac{1}{8}$ "	10"	14	10'-10" + W	2	0'-10" + W

The number and location of landings determine the name of the stairs. When the landing is near the top or near the bottom of the staircase, that is, near the upper or the lower floor so that there are only a few steps between the landing and the nearest floor level, the stair is called a long L stair or a quarter space stair because the plan of the stairs is L-shaped and because, in going up, the climber turns one-quarter of the way around, or at an angle of 90 degrees, and so faces a different way at the top than he was facing when he started up. Fig. 30 shows a stair of this type with the landing near the top, while Fig. 29 shows stairs with the landing near the bottom. Such stairs are sometimes called dog-legged stairs or platform stairs.

TABLE FOR FIG. 30

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Treads T	RUN		RUN		
				No. Risers	L <sub>1</sub>	No. Risers	L <sub>2</sub>	M
8'-0"	13	7 $\frac{3}{8}$ " +	10"	12	9'-2" + W	1	+ W	9'-2"
8'-6"	14	7 $\frac{5}{16}$ " -	10"	13	10'-0" + W	1	+ W	10'-0"
9'-0"	15	7 $\frac{3}{16}$ " +	10"	13	10'-0" + W	2	0'-10" + W	10'-0"
9'-6"	16	7 $\frac{1}{8}$ "	10"	13	10'-0" + W	3	1'-8" + W	10'-0"

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## DOUBLE "L" TYPE STAIRS

The double "L" type stair has two turns, one near the top and one near the bottom. See Fig. 31.

TABLE FOR FIG. 31

Height Floor to Floor H	No. of Risers	Height of Risers R	Width of Treads T	RUN		RUN		
				No. Risers	L <sub>1</sub>	No. Risers	L <sub>2</sub>	M
8'-0"	13	7 $\frac{3}{8}$ " +	10"	11	8'-4" + 2W	1	+W	8'-4" + W
8'-6"	14	7 $\frac{15}{16}$ " -	10"	12	9'-2" + 2W	1	+W	9'-2" + W
9'-0"	15	7 $\frac{3}{16}$ " +	10"	11	8'-4" + 2W	2	0'-10" + W	9'-2" + W
9'-6"	16	7 $\frac{1}{8}$ "	10"	10	7'-6" + 2W	3	1'-8" + W	7'-6" + W

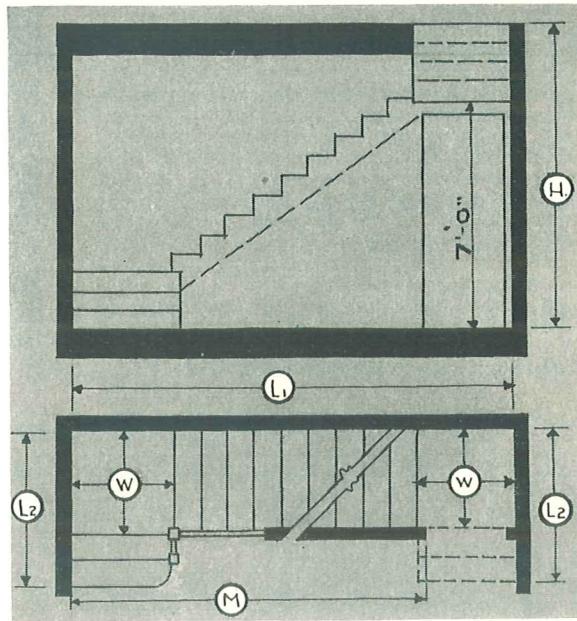


FIG. 31

## WIDE "L" TYPE STAIRS

If the landing is placed near the center of the flight about half way between the two floors, as shown in Fig. 32 this is called a wide "L" stair.

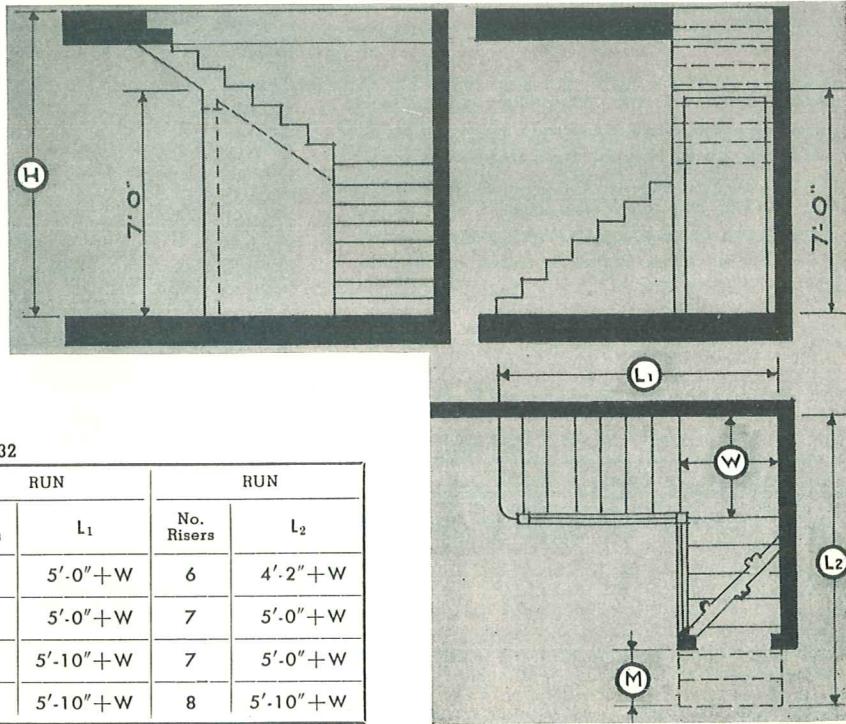


TABLE FOR FIG. 32

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Tread T	RUN		RUN	
				No. Risers	L <sub>1</sub>	No. Risers	L <sub>2</sub>
8'-0"	13	7 $\frac{3}{8}$ " +	10"	7	5'-0" + W	6	4'-2" + W
8'-6"	14	7 $\frac{15}{16}$ " -	10"	7	5'-0" + W	7	5'-0" + W
9'-0"	15	7 $\frac{3}{16}$ " +	10"	8	5'-10" + W	7	5'-0" + W
9'-6"	16	7 $\frac{1}{8}$ "	10"	8	5'-10" + W	8	5'-10" + W

FIG. 32

"U" TYPE STAIRS

Where the space to be occupied by the staircase is limited in both length and width, the stairs may be laid out so that the lower part will go up to a landing which is at least twice the width of the stairs and located at some intermediate point between the floor levels. From this landing the stair will "return on itself" and the second flight of stairs will continue up from the landing in a direction opposite to the direction of the first flight, as shown in Fig. 33. For best results the landing should be at about the middle of the staircase so that there will be about the same number of steps in each of the two flights of stairs, but this need not be so.

A stair of this sort, where the two flights are close to each other with very little space between, is called a narrow "U" stair or a platform stair returning on itself, or a half-space stair.

TABLE FOR FIG. 33

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Treads T	RUN		RUN	
				No. Risers	L <sub>1</sub>	No. Risers	L <sub>2</sub>
8'-0"	13	7 $\frac{3}{8}$ " +	10"	7	5'-0"+W	6	4'-2"+W
8'-6"	14	7 $\frac{5}{16}$ " -	10"	7	5'-0"+W	7	5'-0"+W
9'-0"	15	7 $\frac{3}{16}$ " +	10"	8	5'-10"+W	7	5'-0"+W
9'-6"	16	7 $\frac{1}{8}$ "	10"	8	5'-10"+W	8	5'-10"+W

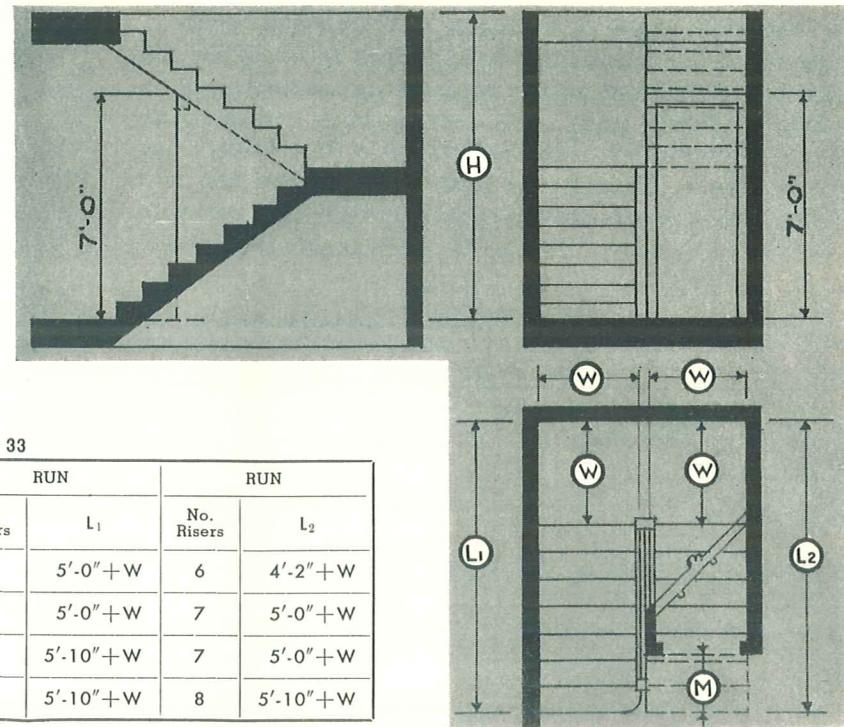


FIG. 33  
NARROW "U"

WIDE "U" TYPE STAIRS

Where space and cost limitations will allow of it, a staircase which presents a much better appearance can be laid out using two landings with a short flight of steps between them as shown in Fig. 34. This type is called a wide "U" or an open newel stair, and the small space enclosed on three sides by the three flights is called a wellhole.

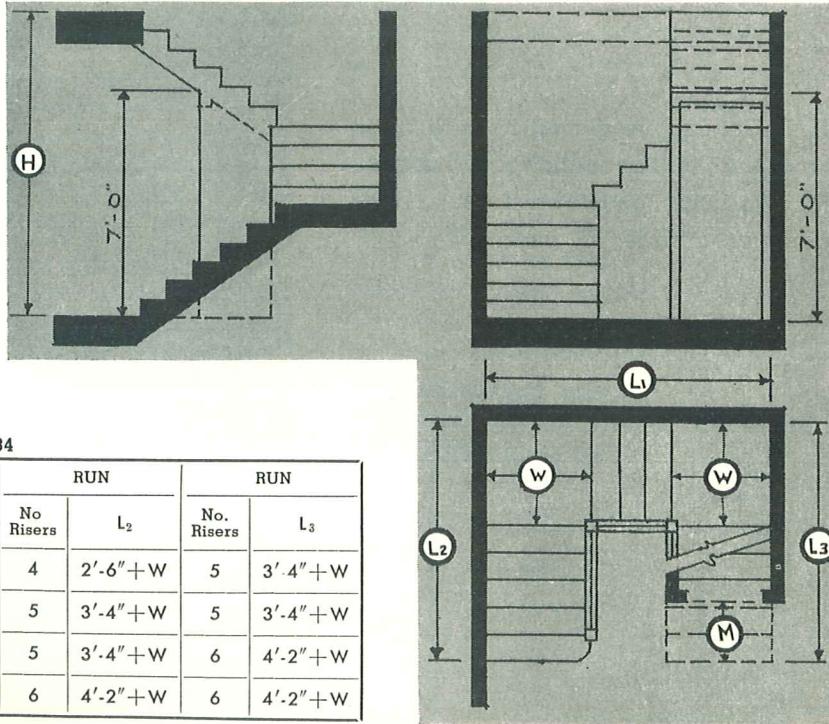


FIG. 34  
WIDE "U"

TABLE FOR FIG. 34

Height Floor to Floor H	Number of Risers	Height of Risers R	Width of Treads T	RUN		RUN		RUN	
				No. Risers	L <sub>1</sub>	No. Risers	L <sub>2</sub>	No. Risers	L <sub>3</sub>
8'-0"	13	7 $\frac{3}{8}$ " +	10"	4	2'-6"+2W	4	2'-6"+W	5	3'-4"+W
8'-6"	14	7 $\frac{5}{16}$ " -	10"	4	2'-6"+2W	5	3'-4"+W	5	3'-4"+W
9'-0"	15	7 $\frac{3}{16}$ " -	10"	4	2'-6"+2W	5	3'-4"+W	6	4'-2"+W
9'-6"	16	7 $\frac{1}{8}$ "	10"	4	2'-6"+2W	6	4'-2"+W	6	4'-2"+W

## CHOOSING THE LOCATION FOR THE STAIR

Careful consideration should be given to the planning for stairs, that is, choosing the most suitable location. There are a number of factors which have a bearing on the proper location for the stairs in any plan. The first four factors have to do with the stairs themselves.

1. Cost of construction of the staircase.
2. Design of the stairs in regard to available space.
3. Layout of the stairs for convenience and safety.
4. Appearance of the staircase.

The next three factors have to do with the relation of the stair location to the other parts of the plan.

5. Access to stairs, on the lower floor and on the upper floor.
6. Location of stairs for light and exposure.
7. The question as to whether the stairs are to be made a decorative feature in the building and therefore put in a prominent location or relegated to the background.

### ITEM 1—COST

The least costly stair to build is the straight stair (without turns, landings, or winders). If it has a wall or partition on each side of the flight, it will be even more economical because the partitions can be depended

upon for support, thereby lightening the strings. Moreover, the balustrade can be replaced by a simple hand-rail supported by brackets on the enclosing walls. A stair of this kind is shown in Fig. 19 and an example of the hand-rail on brackets is shown in Fig. 20.

The long straight stair is not an easy stair and it does not always make a very good appearance, but it requires the least possible space and in a small plan it can be quite conveniently located.

### ITEM 2—SPACE LIMITATIONS

In the majority of cases the space available in the plan, after the principal rooms have been located and the size of the building fixed, it is so restricted as to size and shape that a straight stair cannot be worked in. It then is necessary to lay out the stairs with a turn either at the top or the bottom, making them "L" shaped, or with a turn at both top and bottom, giving them the form of a double "L." Very often space will not permit full size landings at these turns, and *WINDERS MUST BE INTRODUCED*. In some houses it is even necessary to fit the stair into a rectangular space in the plan and consequently it requires three landings. In this case *AT LEAST ONE OF THE LANDINGS SHOULD BE FREE FROM WINDERS*.

### ITEM 3—CONVENIENCE—SAFETY

The long straight stair without landings is neither the most convenient nor the safest,

and a stair with two or more turns in which there are winders, is neither convenient nor safe, although in most stairs of moderate cost there are winders. Where there is room enough and it can be afforded, a staircase of good width with two or preferably with only one generous landing (such as the quarter-space or "L" type, Figs. 30 and 31 or the half space or "U" type, Figs. 33 and 34) is greatly to be preferred, but it is not often that space and cost restrictions will permit these types to be used.

#### ITEM 4—APPEARANCE

The stairway in the front hall or open to the living room must not only be correctly built structurally and for convenience and safety, but it should be graceful, beautiful and lend its charm to the whole interior.

The appearance of the stairway can either break or make the architectural good taste of an interior for indeed, because of its size and composition, it is the center of interest wherever installed. Furthermore, it must be in good architectural relation to the size and proportion of the area to which it is exposed.

Back stairs, attic or basement stairs require no special architectural treatment.

#### ITEM 5—ACCESSIBILITY

Most stairs are centrally located and usually start up from the front hall. With this

arrangement anyone entering can use the stairs without passing through any of the rooms. However, this location requires a larger entrance hall than the average home can accommodate. In this case the stairs are installed in the living room as shown in Fig. 29. On the upper floor the stairs almost always terminate in the hall, never in a room.

In locating the stairs from first to second floor, space is saved by having the stairs to the basement run directly underneath the main stairs as shown in Fig. 29. To accomplish this, the staircase should be so located that the top of the basement stairs can easily be reached from the kitchen without having to pass through any other room.

Attic stairs sometimes run directly up over the main stairs, but this usually means that the attic stairs and part of the attic space are exposed to view from the second-floor hall. This requires a more expensive attic stair than is otherwise needed, and it is often desirable, for other reasons, to have the attic stairs enclosed, with a door at the foot. On this account space is often taken on the second floor to provide for a narrow attic stair separate from the stairway of the main stairs, and the second-floor space above the main stairs is left open and unoccupied, with a balustrade along the edge of the second-floor landing overlooking the staircase. Of course, in very small houses

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this apparent waste of space is not possible nor desirable.

## ITEM 6—LOCATION FOR LIGHT

The stairway, when in use, should always be well lighted, either artificially or with natural light thru a casement or window. It is good practice to plan for the maximum natural light to flow thru windows on the sunny side of the house into the main living rooms. Logically, therefore, if the stairway is to be placed on an outer wall, it belongs on the shady side.

It is usually cheaper to build the staircase in a corner, utilizing the outside walls for support, as shown in Fig. 29, but this is seldom possible because it places the stair in a position not readily accessible, especially on the upper floor, and as a rule the corners are required for the rooms. In northern climates the stairs may well be located on the north side of the house, while the dining and living rooms should preferably be situated on the east and south sides. In warm southern climates, this condition may be reversed.

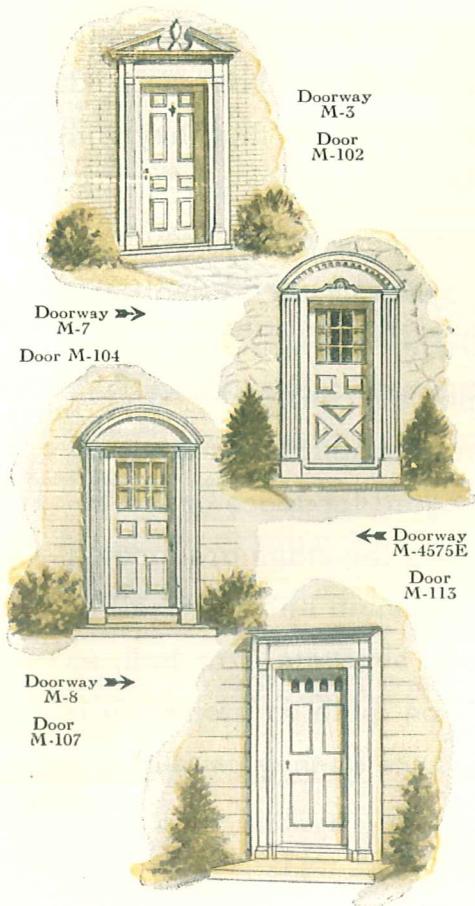
## ITEM 7—PROMINENCE

Sometimes the stairs are regarded not only as a means of getting from one floor to another, but also as a decorative feature in the design of the interior. Item 7 suggests this condition, and where money is spent on

the stairs to make them decorative they are usually so placed that they will be seen and appreciated. This may mean that they will start up out of the entrance hall or the living room, or in large mansions they may be located in a special stair hall off the entrance hall. Under such circumstances, economy need not be considered, and a spacious open newel or spiral staircase may be used without regard for space or cost restrictions. Sometimes the stairs are located in an alcove off the main entrance hall or even in an entirely separate stair hall, so that they will not be quite so prominent a feature at the entrance as they usually are.

## CELLAR STAIRS

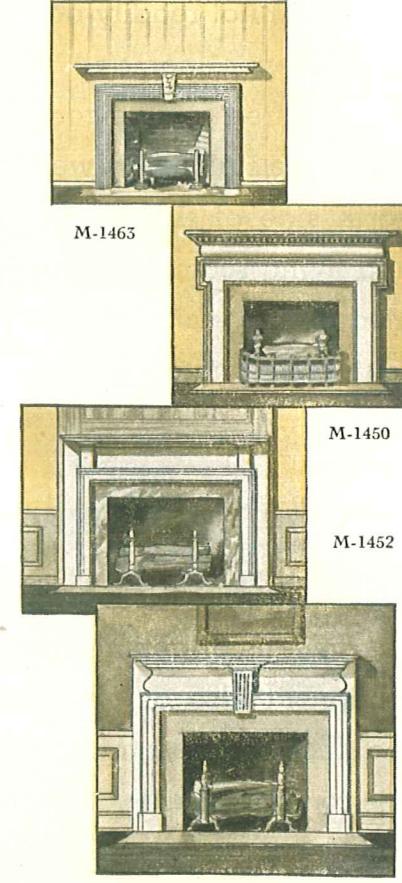
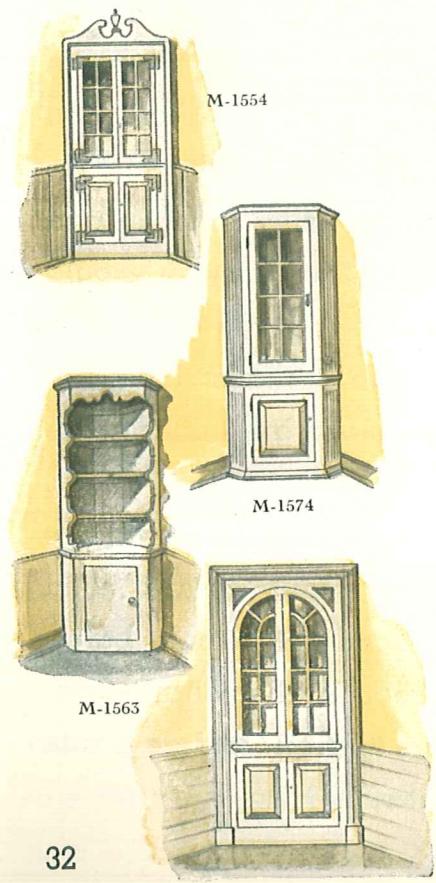
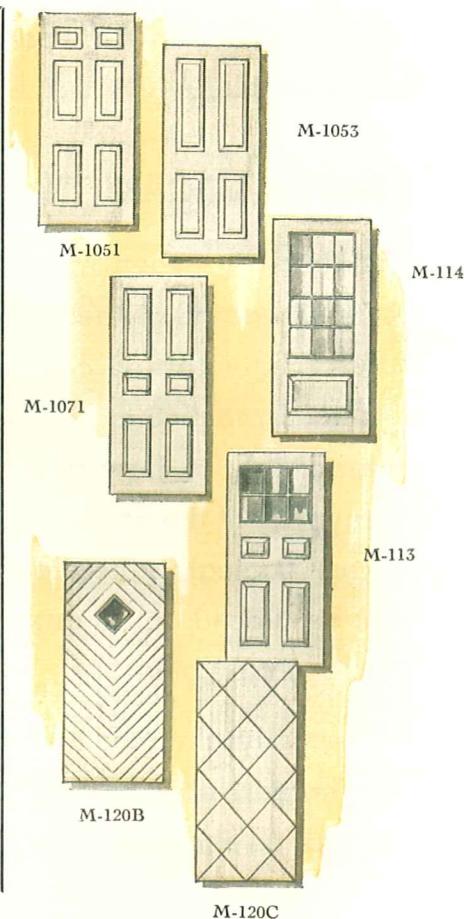
In these days of oil burners, stokers, and gas-fired furnaces, the furnace rooms in many homes are converted into recreation rooms or play rooms. The basement thus takes on a new active, living function and requires dressing up. The stairway should therefore compare well with the main stairway in design, though perhaps somewhat simpler. Most cellar stairs are built of pine with simple, cut strings and plank treads. Often a cellar stair is without risers and has the plainest sort of small, square, solid newel post and a hand-rail without balusters. As the head room in the cellar is low, the run of the stairs is short, and as a rule it can be a straight run.

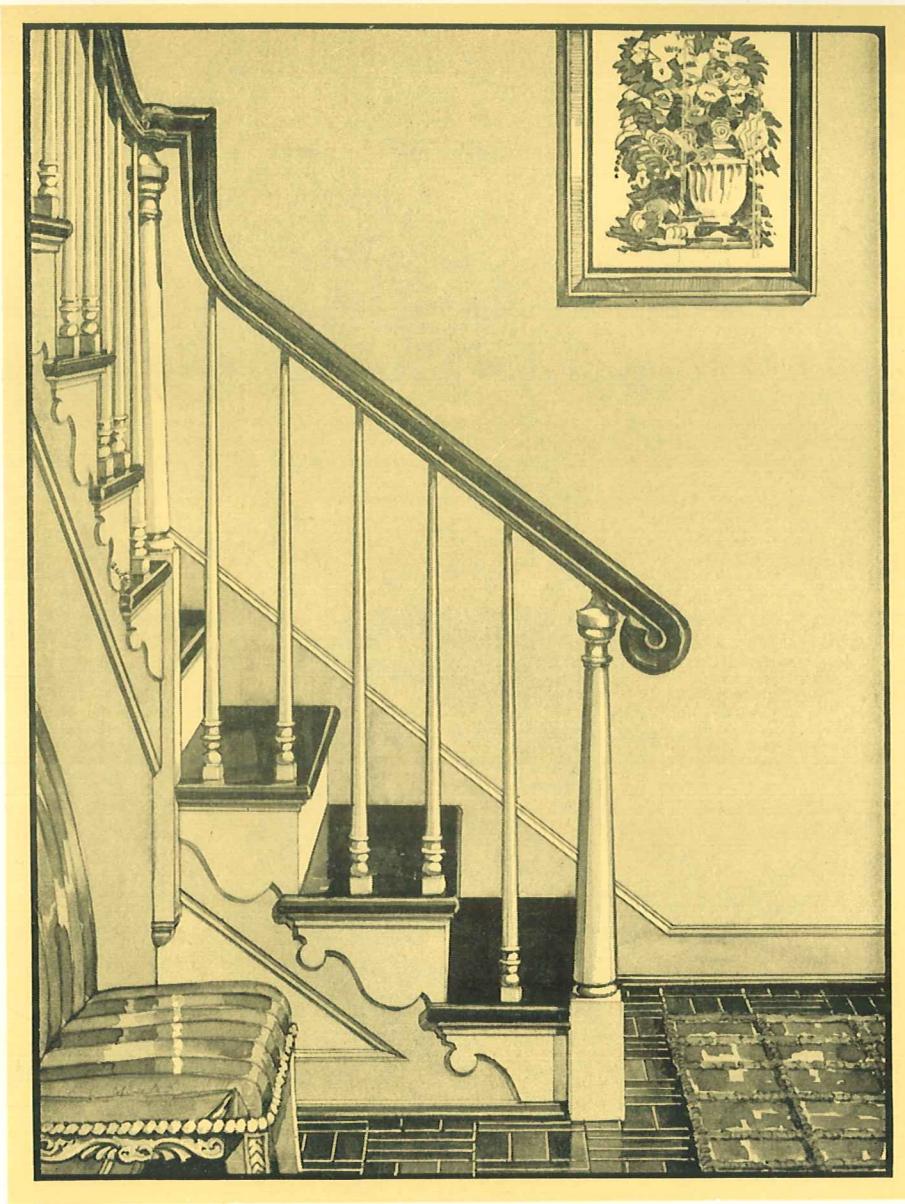


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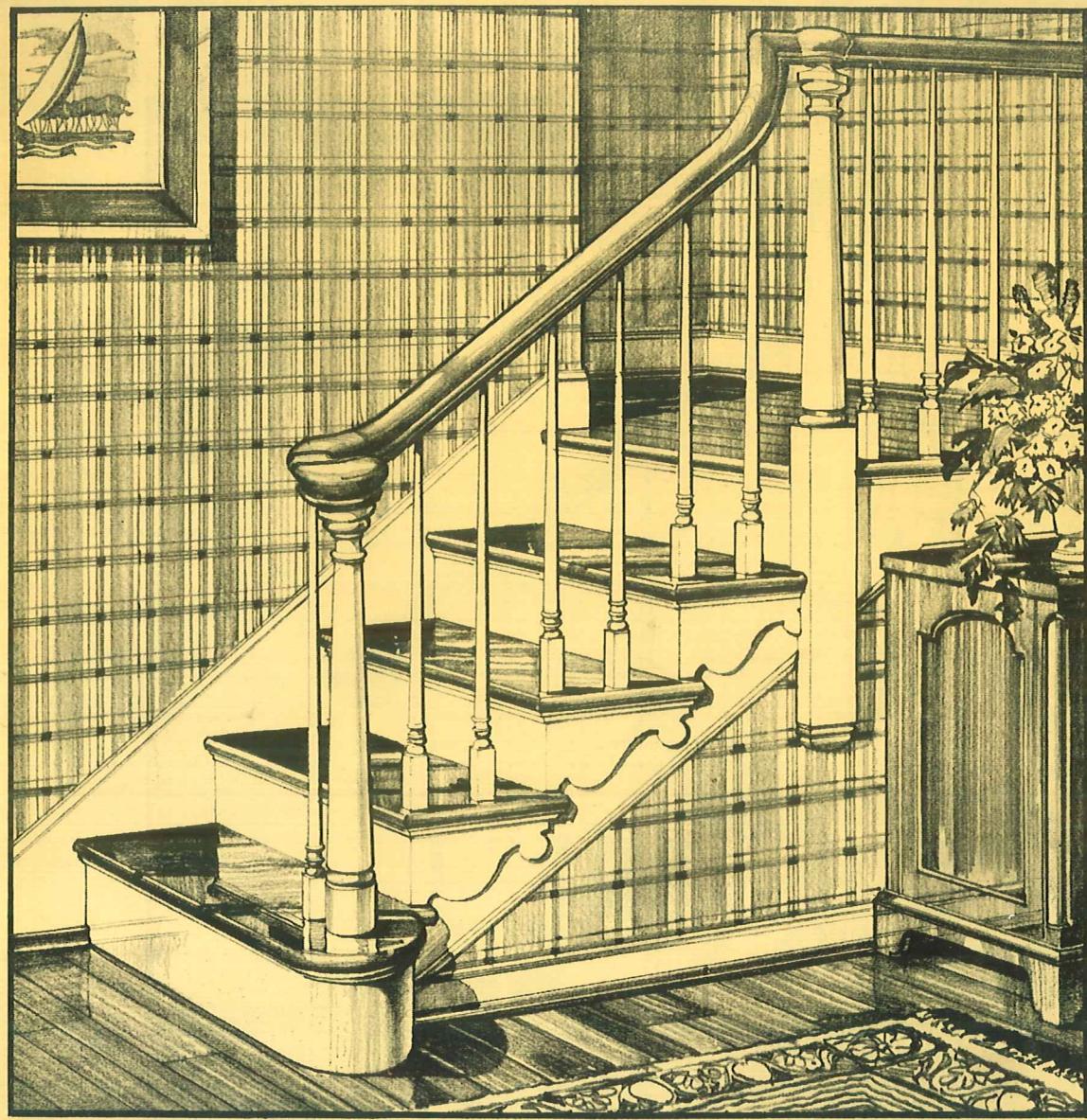




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